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GENERAL PRINCIPLES  
OF THE  
STRUCTURE OF LANGUAGE.



# GENERAL PRINCIPLES

OF THE

# STRUCTURE OF LANGUAGE

BY

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# GENERAL PRINCIPLES

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"	250	"	6	"	" <i>ū</i> ,"	<i>read</i>	" <i>ü</i> "

in none others is this form of expressing variations in the fact so largely used. There is a certain approximation to the Syro-Arabian in this respect in the Tibetan, as may be seen by referring to the remarkable formations given in 36. In these, however, we see a greater singleness of expression; as the verb with its variations does not go beyond the one syllable, but is expressed in one act of utterance which must be prompted by one act of thought. This singleness belongs to the monosyllabic character which marks more or less all the Chinese group of languages. The Syro-Arabian languages in their original and native form, as seen in Arabic, have not a monosyllabic but rather a trisyllabic character; yet all the syllables are by the vocalisation united into an element of speech which is almost as single in the thought which it expresses as the Tibetan monosyllables, for the significance of each vowel in the Syro-Arabian stem belongs not to the syllable which it sounds, but to the whole stem, which consequently is modified, without being broken, by changes in its vowels.



# GENERAL PRINCIPLES

OF THE

## STRUCTURE OF LANGUAGE.

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### BOOK II.

(*Continued.*)

INDUCTIVE PROOF OF THE CAUSES WHICH HAVE DETERMINED THE STRUCTURE OF LANGUAGE.

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#### CHAPTER I.—(*Continued.*)

PART II.—GRAMMATICAL SKETCHES, NOTING SPECIALLY THE MAGNITUDE OF THE ELEMENTS OF LANGUAGE AND THEIR TENDENCIES TO COMBINE, VIEWED IN CONNECTION WITH THE QUICKNESS OF EXCITABILITY OF THE RACE.

##### *Syro-Arabian Languages.*

48. That which has always been noted as the peculiar feature of the Syro-Arabian languages is their tendency to express modifications of the verb by internal changes of vocalisation of the verbal stem. In many other languages such internal changes are to be found, but in none others is this form of expressing variations in the idea of fact so largely used. There is a certain approximation to the Syro-Arabian in this respect in the Tibetan, as may be seen by referring to the remarkable formations given in 36. In these, however, we see a greater singleness of expression; as the verb with its variations does not go beyond the one syllable, but is expressed in one act of utterance which must be prompted by one act of thought. This singleness belongs to the monosyllabic character which marks more or less all the Chinese group of languages. The Syro-Arabian languages in their original and native form, as seen in Arabic, have not a monosyllabic but rather a trisyllabic character; yet all the syllables are by the vocalisation united into an element of speech which is almost as single in the thought which it expresses as the Tibetan monosyllables, for the significance of each vowel in the Syro-Arabian stem belongs not to the syllable which it sounds, but to the whole stem, which consequently is modified, without being broken, by changes in its vowels.

The singleness of thought indeed is, from causes to be mentioned presently, less strict in the Syro-Arabian verb than in the Chinese monosyllable, though in this, too, it is probably not absolute, for the inflected tones (3) involve a change of utterance which probably corresponds to a change of thought within the idea. But in the Syro-Arabian verb the divided vocalisation, the person, the reflex object, the causative element, express different constituents of the idea. And though they are all fused into a unity by the significance of the vowels, referring each to the whole, they are distinctly present to the consciousness. What is remarkable, however, is that each element, when uttered with a vowel which belongs to the whole, must be thought simultaneously with the whole; so that instead of each part being thought and then combined, it is thought as combined. The mind, as it thinks the whole, resolves it into its constituents, but refuses to break the idea. It cannot be moved to concentrate itself on a part, but shows a prevailing tendency to think the whole as a single object, though that singleness is not so great as in Chinese.

The Syro-Arabian singleness is less than the Chinese also in respect of external additions to the stem, which do not partake of its vocalisation. But their not partaking of the vocalisation and the connective elements that are used with them show that they are outside the single idea, and only partially mingled with it as thought passes to them (56, 80, 103). The radical idea itself, however, has remarkable integrity; and to this probably it is due that the Syro-Arabian root seldom has the same consonant for the first and second syllables; for this would be a reduplication of the first consonant of the second syllable, and would convey a sense of the second and third syllables, as constituting the root, and of the root being strengthened by being first partially thought and then thought entire. The doubling of the second or third radical consonant, or the repetition of the second as third, does not suggest the addition of a partial thought of the idea, but rather a strengthening or extension of the single mental act of thinking the idea. Generally when the third radical is the same as the first, it expresses the beginning of a second thought of the radical idea, or else the first radical expresses the end of a first thought of it; and the formation is due to a doubling of the root with a subsequent abbreviation by dropping the beginning or the end of it.<sup>1</sup> Such doubling of the root is permitted by these languages, but a partial thought of it is contrary to their genius.

The vocalisation is the most characteristic feature of these languages, and its meaning must be studied before their essential nature can be understood. In many languages a difference is to be seen between verbal roots, which in their original use as verbs have taken up into themselves a sense of the process of being or doing, and other roots to which that process has to be added as an external element. Such a difference has been observed in Japanese (45), and it exists in Tibetan, distinguishing from the other verbs those which are conjugated with internal change. This same difference must exist

<sup>1</sup> Gesenius, Hebrew Grammar, sect. 30. 2, d.; Fürst, *Lehrgeb. Aram.*, sect. 161; Dillmann, *Gram. Æthiop.*, p. 101.

between the latter verbs in Tibetan, and all the verbs in Chinese, none of which take up into the verbal stem any modification in the idea of the verb, but all of them add this as a distinct idea, the stem being thought with so little difference from a substantive that the verbal idea of the root suggests no difference of expression from that of the substantive idea. (See also III. 93; VI. 25, 159.)

Now, this sense of verbal process which in the degree in which it exists in Tibetan causes the difference mentioned between Tibetan and Chinese, existing in a still greater degree in the Syro-Arabian languages, along with greater fulness of idea, causes the difference between them and Tibetan; that whereas Tibetan has a monosyllabic character, they are in their native form trisyllabic. For it is this abundant sense of the process of being or doing expressed in the successive syllables that has enlarged the Syro-Arabian stem. And that this sense of process has got expression without breaking the unity of the stem or getting outside the limits of the root as an external element is a striking evidence of the fulness of the mental act in which the stem is thought, so as to take up this element, and at the same time of the singleness of thought with which the mind absorbs the whole of the latter into the former, instead of spreading into it as an additional part. This sense of process completed or going on has in the life of the race become associated in one idea with that which the root expresses, and is simultaneously thought with the latter in a single act of the mind. It has a length, as of beginning, middle, and end, which gives a corresponding length to the expression. And of this incorporated sense of process the Chinese is destitute, while the Tibetan has it without this fulness of succession. It is not only the Syro-Arabian verb which has this pregnant singleness, it tends to show itself also in the stem of the noun; for, in truth, the noun, if a verbal noun, involves the process which is in the verb, and if it be not verbal, yet its attributive part may be thought in its substance (Def. 4) as a process of being or doing or as part of such a process, and will tend to be thought so when, as in these languages, such is the habitual conception of the verb (81). Elements of gender, number, and case, and even some derivative elements expressive merely of connection with a substance, may belong to the noun as external adjuncts, but they are so fine that they little affect its singleness. The pronominal suffixes, objective and possessive, are quite external, the mind passing to them with partial mingling in the connection, or with a connective element. And thus in both noun and verb the Syro-Arabian languages show a tendency to think the natural units of thought as undivided wholes, though not so strictly as Chinese (Book I., chap. i., 10).

49. This tendency to singleness of idea without separation of parts contained in the idea, causes that comparative absence of roots as distinct and separable elements of words derived from them, which distinguishes these languages. Instead of such formations consisting of a root and a derivative element added to it, there are in the Syro-Arabian languages combinations of two distinct words which are not unlike some of the so-called compounds in Chinese (5), and which indicate a similar cause in the mental action of the race. Chinese

thought indeed is more objective than Syro-Arabian. The former thinks substantive objects more in their concrete objectivity, the latter more in their attributive nature (Def. 4). And the Syro-Arabian having more sense of the general, and less concrete particularity of thought, does not find it necessary, like the Chinese, to join together two nouns of kindred meaning in order to think a common nature. Substantive objects are better distinguished from each other by the roots in Syro-Arabian speech, because the nature which belongs to them is more fully thought. There is no need therefore for the synonymous compounds which distinguish the meanings of the Chinese monosyllables. But the fundamental similarity between the two families in the singleness of thought which belongs to both appears in the tendency to modify a radical idea with a distinct word, thought separately, instead of with a derivative element thought as part of the idea. This is to be seen in the Syro-Arabian languages as well as in Chinese (5), Siamese (19), and Burmese (21). Tibetan has somewhat more power of thinking an additional element without passing from the radical idea (38), and it forms adjectives by adding derivative elements to its nouns (33), as it also distinguishes tense and mood in some verbs by adding particles (36). But the Syro-Arabian tends to use instead of a derivative element a separate word connected with the radical word by syntax. "The Arabs use several nouns with a following substantive in the genitive as a substitute for adjectives. These *quasi* adjectives are placed after the noun which they qualify, and in apposition to it." Thus: possessor of learning for learned; mistress of thorns for thorny; son of the way for traveller.<sup>1</sup> The same feature may be noted in the other languages of the family (86, 111); and it is probably owing to the inaptitude for separating fine elements that in these languages the verb to be, is thought so concretely, and not as the abstract copula.

## ARABIC.

50. The Syro-Arabian languages developed very deep gutturals; and in their most perfect form, the Arabic, utterance had retreated from the lips, and brought into active service the root of the tongue, speech being from the chest with strong pressure of breath; which facilitated and attracted guttural utterance.

This tendency to guttural utterance seems to have been favoured by the characteristic structure of these languages. The Syro-Arabian principle that the radicals should generally be consonants, and the vowels only modifiers of the radical idea, tends to oblige every syllable to begin with a consonant; and this rule often required in roots which had a radical vowel originally, the development out of the radical vowel of a consonant to go before it and bear the radical significance. Such consonant would naturally be a deep guttural thickening of the vowel utterance. Thus Dillmann says of the

<sup>1</sup> Wright, Arabic Grammar, Syntax, p. 138.



guttural spirants or aspirates: "From their middle nature between consonants and vowels may be explained their extensive use in the Semitic languages. They very often occur in the formation of roots where roots having an initial middle or final vowel strive to get a consonant element, and the weaker utterances first occurring are thickened to the harder breathings, principally through the influence of the other radicals."<sup>1</sup>

It is, however, only in their pure and native form, Arabic, that this guttural character of these languages has been preserved. In the other languages the peculiar gutturals *ğ* and *ğ'* have been well-nigh lost, and the preference of *w* to *y* as a first radical, which is in Arabic, has in Hebrew and Syriac been reversed into a preference of *y* to *w* (75, 121).

The Arabic consonants are: *h*, *ħ*, *q*, *ğ*, *ğ'*, *ẖ*, *k*, *g*, *ẖ*, *y*, *t*, *d*, *t'*, *d'*, *s*, *t*, *d*, *s*, *z*, *r*, *l*, *n*, *θ*, *θ'*, *f*, *b*, *w*, *m*; *h* is the *spiritus lenis* denoted by *hemza*; *ğ* is *ğain* ع, described as a guttural *g*; *ğ'* is *'ain* ع, described as a strong guttural, unpronounceable to Europeans as well as to Turks and Persians, uttered with a smart compression of the upper part of the windpipe and a forcible emission of the breath; *t* is *tā* ط, a strongly articulated palatal *t*; *d* is *dāl* ض, a strongly articulated palatal *d*; *t'* and *d'* are *sāl* and *zāl* ص, the aspirates of *t*, *d* pronounced with a sibilation.<sup>2</sup>

The vowels being subordinate to the consonants, are in general somewhat indistinctly enunciated. When preceded or followed by *ğ*, *ğ'*, *ẖ*, or *ẖ*, or by *q*, *t*, *d*, *t'*, *d'*, they are rather more open than with the other consonants, but as distinguished in writing they are only *a*, *i*, *u*, long and short, and the diphthongs are *ai* and *au*.<sup>3</sup>

The vowel of a shut syllable is almost always short, that of an open syllable may be either long or short. A syllable cannot begin with two consonants, nor can it end with two except in pause,<sup>4</sup> that is, at the end of a period. The accent is on the penultimate when long by nature or position, but when this is short the accent is on the antepenultimate.<sup>5</sup>

51. The personal pronouns in Arabic are given in the following tables, in which a parenthesis denotes that the included letter is eclipsed.

The pronoun of the first person, which in Egyptian is *anok*, seems akin to the Egyptian root *anẖ*, life.<sup>6</sup> And the *hu* of the third person is akin to Hebrew *hawah*, to be. In the second person *ant*- corresponds to Egyptian *ent*, and is demonstrative. The dual is stronger than the plural, for it doubles the idea of the stem which the plural thinks less distinctly. The slender vowel *i*, and the breathless mute *t*, are significant of the feminine. The *t* of the suffix of first person is of different significance.

<sup>1</sup> Dillmann, Gram. Æthiop., p. 36; Fürst, Lehrgeb. Aram., sect. 100.

<sup>2</sup> Wright, Arabic Grammar, p. 3-6.

<sup>3</sup> Ibid. p. 7-9.

<sup>4</sup> Ibid. p. 24.

<sup>5</sup> Ibid. p. 25.

<sup>6</sup> Bunsen's Egypt, i. p. 456.

*Syro-Arabian Personal Pronouns separate.*

	Arabic.	Hebrew.	Syriac.	Ethiopic.	Amharic.
SINGULAR.	1. <i>hanā</i>	<i>hānōki, hanī</i>	<i>heno</i>	<i>hana</i>	<i>hēnē</i>
	2. m. <i>hanta</i>	<i>hātāh</i>	<i>ha(n)t</i>	<i>hanta</i>	<i>hanta, hantu rev.</i> <i>hērsawo more rev.</i>
	2. f. <i>hanti</i>	<i>hat</i>	<i>ha(n)ti</i>	<i>hanti</i>	<i>hanf'i, hanf'</i>
	3. m. <i>huwa</i>	<i>hū</i>	<i>hū, hu</i>	<i>vehitū</i>	<i>hērsu</i>
	3. f. <i>hiya</i>	<i>hī</i>	<i>hi, hoi</i>	<i>yehēti</i>	<i>hērsawā</i>
DUAL.	2. <i>hantumā</i>				
	3. <i>humā</i>				
	1. <i>naχnu</i>	<i>hanaχnū</i>	<i>χnan</i>	<i>nēχna</i>	<i>hēnā</i>
	2. m. <i>hantum</i>	<i>hatem</i>	<i>ha(n)tān</i>	<i>hantēmū</i>	<i>hēlāntē</i>
	2. f. <i>hantunna</i>	<i>haten</i>	<i>ha(n)tēn</i>	<i>hantēn</i>	
	3. m. <i>hum</i>	<i>hēm</i>	<i>honūn, henūn,</i> <i>henūn</i>	<i>hēmāntū,</i> <i>vehētōmū</i>	
	3. f. <i>hunna</i>	<i>hēn</i>	<i>honēn, henēn,</i> <i>henēn</i>	<i>hēmāntū,</i> <i>vehētōn</i>	<i>hērsāt'awē</i>

*Objective and Possessive Suffixes.*

	Arabic.	Hebrew.	Syriac.		Ethiopic.	Amharic.
SINGULAR.	1. <i>-nī obj.,</i> <i>-ī poss.</i>	<i>-nī obj., -ī</i> <i>poss.</i>	Obj. <i>-nī,</i> <i>-anī</i>	Poss. <i>-ī,</i> <i>pl. -ai</i>	<i>-nī obj.,</i> <i>-ya poss.</i>	<i>-nē obj., -ē poss.</i>
	2. m. <i>-ka</i>	<i>-kā</i>	<i>-k, -ok</i>	<i>-ok,</i> <i>pl. -aik</i>	<i>-ka</i>	<i>-h obj., -h poss.</i> <i>-āṭ'ehu rev.</i> <i>-awo more rev.</i>
	2. f. <i>-ki</i>	<i>-k</i>	<i>-ki,</i> <i>-eki</i>	<i>-eki,</i> <i>pl. -aiki</i>	<i>-kī</i>	<i>-s obj., -s poss.</i>
	3. m. <i>-hu</i>	<i>-hū, -v, -ō</i>	<i>-(h)i,<sup>1</sup></i> <i>-ch</i>	<i>-eh, pl.</i> <i>-au(h)i</i>	<i>-hū</i>	<i>-awē or -t obj., -u or -awē</i> <i>poss., -āṭ'awē rev. poss.</i>
	3. f. <i>-hā</i>	<i>-hā, -h</i>	<i>-h, -oh</i>	<i>-oh,</i> <i>pl. -ēh</i>	<i>-hā</i>	<i>-āt obj., -wā poss.,</i> <i>-āṭ'awē rev. poss.</i>
DUAL.	2. <i>-kumā</i>					
	3. <i>-humā</i>					
PLURAL.	1. <i>-nā</i>	<i>-nū</i>	<i>-n, -an</i>	<i>-an,</i> <i>pl. -ain</i>	<i>-na</i>	<i>-na perf. obj., -n pres.,</i> <i>obj., -āṭ'ēn poss.</i>
	2. m. <i>-kun</i>	<i>-kem</i>	<i>-kūn</i>	<i>-kūn,</i> <i>pl. -aikūn</i>	<i>-kemmū</i>	
	2. f. <i>-kunna</i>	<i>-ken</i>	<i>-kēn</i>	<i>-kēn,</i> <i>pl. -aikēn</i>	<i>-ken</i>	<i>-āṭ'ehu obj. and</i> <i>poss.</i>
	3. m. <i>-hum</i>	<i>-hem, -m,</i> <i>-mō</i>	<i>-hūn,</i> <i>pl. -aihūn</i>	<i>-hūn,</i> <i>pl. -aihūn</i>	<i>-hōmā</i>	
	3. f. <i>-hunna</i>	<i>-hen, -n</i>	<i>hēn,</i> <i>pl. -aikēn</i>	<i>hēn,</i> <i>pl. -aikēn</i>	<i>-hōn</i>	<i>-āṭ'awē obj. and</i> <i>poss.</i>

<sup>1</sup> *-u(h)i*, after *y*.

*Subject Suffixes of the Verb.*

		PERFECT.					IMPERFECT.					IMPERATIVE.		
		Arabic.	Hebrew.	Syriac.	Ethiopic.	Amharic.	Arabic.	Hebrew.	Syriac.	Ethiopic.	Amharic.	Arabic.	Hebrew.	Syriac.
SINGULAR.	1.	-tu	-tī	-et	-kū	-hū								
	2. m.	-ta	-tū	-t	-ka	-h								
	2. f.	-ti	-t	-ti	-kī	-h rev. -āṭ'ehu rev.					-u rev.			
	3. m.					-s	-ina	-ī, -īn	-īn	-ī	-i	-ī	-ī	-i
	3. f.	-at	-āh	-at	-at	-aṭ'			-i					
DUAL.	2.	-tumā												
	3. m.	-ā					-āni					-ā		
	3. f.	-atū					-ānī					-ā		
PLURAL.	1.	-nā	-nū	-n	-na	-na								
	2. m.	-tum	-tm	-tan <sup>1</sup>	-kēnmū	-āṭ'ehu	-āna	-ān	-ān	-ā	-u	-ā	-ū	-ū
	2. f.	-tumna	-ten	-tēn	-kēn		-na	-nāh	-ōn	-ā		-na	-nāh	-ēn
	3. m.	-ū	-ū, -ān <sup>1</sup>	-u <sup>2</sup>	-ū	-ū	-ūna	-ūn	-ūn	-ū	-u			
	3. f.	-na		-i <sup>2</sup>	-ā		-na	-nāh	-ōn	-ū				

*Subject Prefixes of the Imperfect.*

						Arabic.	Hebrew.	Syriac.	Ethiopic.	Amharic.
SINGULAR.	1.	.	.	.	.	h-	h-	hē-	hē-	hē-
	2.	.	.	.	.	t-	t-	te-	tē-	tē-
	3. masculine	.	.	.	.	y-	y-	ne-	yē-	yē-
	3. feminine	.	.	.	.	t-	t-	te-	tē-	tē-
DUAL.	2.	.	.	.	.	t-				
	3. masculine	.	.	.	.	y-				
	3. feminine	.	.	.	.	t-				
PLURAL.	1.	.	.	.	.	n-	n-	ne-	n-	hēn-
	2.	.	.	.	.	t-	t-	te-	tē-	tē-
	3.	.	.	.	.	y-	y-	ne-	yē-	yē-
	3. feminine	.	.	.	.	y-	t-	ne-	yē-	yē-

There is also in Arabic a feminine suffix *na*; and different from this there is a plural suffix *-na*, and a dual suffix *-ni* (see 62).

The tendency to think the act or state in its general associations

<sup>1</sup> Rare.

Sometimes dropped.

when thought as completed, *i.e.*, in the perfect, causes the stem to precede the person; but when thought in the imperfect as still engaging the subject, the idea of it is limited by its inherence in the personality of the subject, which it reduces by taking the place of the subject's life (53), and follows the person in expression; while number and gender, when separable from the personality, follow the verbal stem as not determining the idea of it (Def. 23).

The simple demonstrative pronoun in Arabic is *θū*, this, that, masculine; *θay*, *tay*, or *tā*, feminine. In the plural of both genders the stem is *hul*; the pronoun is *hulya*, or *hulāhi*, common gender. Closely connected in its origin with *θū* is another monosyllable which is commonly used in the sense of possessor, owner, *viz.*, *θū* masculine, *θātu* feminine nominative, *θī*, *θāti* genitive.

Stronger demonstratives are formed from the simple demonstrative by subjoining to it the suffix of the second person in the gender and number corresponding to the person addressed, and with or without the demonstrative element *li* intervening.

The demonstratives, simple and compound, may be strengthened also by prefixing *hū*, which has the same force as Latin *-ce*, and which is called by the Arabs the particle which excites attention.

The definite article is *hal*.<sup>1</sup>

The relative pronouns are: *hallaθī* masculine, *hallatī* feminine, who, which; *man*, he who, she who; *mū*, that which; *hayyun* he who; *hayyuman*, whoever; *hayyumū*, whatever. The pronoun *man*, *mū* is indeclinable, and is never used adjectively; *hallaθī* forms a plural, *hallaθina* masculine, *hallatī* feminine, and a nominative and genitive dual, *hallaθāni*, *hallaθaini* masculine, *hallatāni*, *hallataini*, feminine; *hayyun* masculine, *hayyatun* feminine, is regularly declined in the singular (59), but has commonly neither dual nor plural.

The relative pronouns, with the exception of *hallaθī*, are also interrogative, and to them may be added *ham*, how much?

The interrogative *man*, who? has the distinctions of gender, number, and case only when it stands alone; *hayyun* when constructed with a following noun drops the final *n*; as *hayyu kitūb<sup>gen.</sup>in*, which book (*quid libri*).<sup>2</sup>

52. The varieties of the verbal stem, or derived forms of the Arabic verb, indicate a tendency to reflexive formations which express occupation about self; they also show an attention to the whole subjective process, including repetition or intensification, or direction to an end, and they reveal a habit of connecting action immediately with the object rather than by transition to the object, transitional or relative thought not being favoured by the genius of the language.<sup>3</sup>

The simple and derived forms may be seen in the following example:

(1.) *Fajāla*. "The vowel of the second radical is *a* in most of the transitive, and not a few of the intransitive verbs. The vowel *i* in the same position has generally an intransitive signification, *u* invariably so. The distinction between them is, that *i* indicates a temporary state or condition, or a merely accidental quality in persons

<sup>1</sup> Wright, p. 215-218.

<sup>2</sup> Ibid. p. 219-223.

<sup>3</sup> Ibid. p. 23-43.

or things; whilst *u* indicates a permanent state or a naturally inherent quality"<sup>1</sup> (see 79).

(2.) *Faḡḡala*; intensive, temporally extensive, numerically extensive, iterative, causative, or factive.

(3.) *Fūḡala*; effort or attempt, act or state reaching to indirect object, reciprocal.

(4.) *Ḥaḡḡala*; causative; sometimes expresses an intransitive state thought too objectively to take up the subjective process in all its strength, so that the realisation becomes causation.

(5.) *Tafaḡḡala*; reflexive; experience by subject, of an action or effect on self, whether this proceeds from subject or from another.

(6.) *Tafūḡala*; reflexive of third.

(7.) *Ḥinḡḡala*; reflexive, never reciprocal, the subject being the direct object of an action which he does or allows.

(8.) *Ḥiḡḡala*; reflexive, the subject being the direct or indirect object, reciprocal.

(9.) *Ḥiḡḡalla* (rare); colours and defects thought as clinging firmly.

(10.) *Ḥistaḡḡala*; reflexive of fourth, the subject being either direct or indirect object.

(11.) *Ḥiḡḡalla* (very rare); same as ninth in a higher degree.

The following forms are not explained:—

(12.) *Ḥiḡḡawḡala*.

(13.) *Ḥiḡḡawwala*.

(14.) *Ḥiḡḡanlala*.

(15.) *Ḥiḡḡanlai*.

The causative and reflexive elements are in the beginning, because they determine the whole idea of the verb as causative or reflexive.

In the fourth form the causation is incorporated in the process of the verb, taking up its first vowel.

In the seventh, eighth, and tenth forms, the reflex object is incorporated in the verb; *n*, which is probably less objective than *t*, blends into the verb more closely than *t*, just as in the meaning of the seventh form the reflex object is more nearly related to the action than in the others; and *t* takes always *a* to express the movement to it as object; this *a*, however, being in the eighth and tenth forms the initial part of the process.

In the fifth and sixth forms the verb is stronger, and the reflex object more distinct.

In the ninth and eleventh forms there is no initial vowel of process, because it neither goes to the subject nor from it, but only clings to it. The initial *s* of the causative element, which has been dropped in the fourth form, appears in the tenth.

The initial *i* in the forms after the sixth is euphonic, because two consonants cannot begin a syllable.

53. The derived forms, as well as others of the characteristics of the Arabic verb, spring from the high degree of subjectivity with which it is thought.

For the verb being thought mainly in the subjective process is

<sup>1</sup> Wright, p. 28.

varied so as to assume a different form, if it involve a larger expenditure of subjective energy, or a greater reaching of the subject to an object, or a causation thought subjectively in the cause rather than in the effect, or a reflex action on the subject, this last being different according as the subject is more or less distinct in thought from the subject as object, or the latter from the process.

For the same reason, the thought of the process as engaging the subject is strongly distinguished from the thought of it as no longer doing so; the latter tending to part with the sense of the subject more than if the verb, instead of being thought as no longer engaging the subject, were thought as an engagement of it in past time, and the former determining the verb by the subject so as to limit the thought of it to what it is in the subject. The abstract person, therefore, or third singular masculine, disappears from the perfect; and in the imperfect the person element of all the persons is prefixed.

Moreover, this high subjectivity of the verb causes the thought of the subjective process to take up a sense of the force of the subject as masculine or feminine (Def. 16), which it retains even when thought in the perfect as no longer engaging the subject.

And the verb with its subjective contents is thought in one act which simultaneously embraces them all.

54. There are two voices, active and passive; and two tenses, perfect and imperfect, which refer not to position in time, but to completion or incompletion; the completion or incompletion being that of the engagement of the subject rather than of the accomplishment of external fact.

The following are the perfect and imperfect, third singular, active and passive of all the forms of the verb *qatala*:<sup>1</sup>

Active.		Passive.	
perfect.	imperfect.	perfect.	imperfect.
1. <i>qatala</i>	<i>yagtulu</i>	<i>qutila</i>	<i>yuqtalu</i>
2. <i>qattala</i>	<i>yuqattilu</i>	<i>quttila</i>	<i>yuqattalu</i>
3. <i>qātala</i>	<i>yuqātilu</i>	<i>qūtila</i>	<i>yuqātalu</i>
4. <i>haqtala</i>	<i>yuqtilu</i>	<i>huqtila</i>	<i>yuqtalu</i>
5. <i>taqattala</i>	<i>yataqattalu</i>	<i>tuqattila</i>	<i>yutaqattalu</i>
6. <i>taqātala</i>	<i>yataqātalu</i>	<i>tuqātila</i>	<i>yutaqātalu</i>
7. <i>hinqatala</i>	<i>yanqatilu</i>	<i>hunqutila</i>	<i>yunqatalu</i>
8. <i>hiqtatala</i>	<i>yaqtatilu</i>	<i>huqtutila</i>	<i>yuqtatalu</i>
9. <i>hiqtalla</i>	<i>yaqtallu</i>	...	...
10. <i>histaqtala</i>	<i>yastaqtilu</i>	<i>hustuqtila</i>	<i>yustaqtalu</i>
11. <i>hiqtālla</i>	<i>yaqtāllu</i>	...	...

If the vowels be taken as having the significance assigned respectively to each in connection with the first form in 52, the vocalisation of these perfects and imperfects may perhaps be understood as follows. The vowel of the first radical, which in the active is *a*, in the passive is *u*, the former expressing motion outward, the latter motion inward. In thinking the process of doing or being the mind starts from the subject, and in the natural order of thought what comes first is a

<sup>1</sup> Wright, pp. 240, 241.

sense of the realisation as outward in reference to the world, or inward as affecting the subject, and of these the former naturally suggests *a* and the latter *u*, for the vowel of the first radical. Still thinking the process with a strong sense of the subject, the mind will have a sense of it as in its nature passing from the subject or dwelling in the subject, and in the latter case as on the one hand temporary or accidental or on the other hand permanent or natural; and these aspects of it are suggestive respectively of *a*, *i*, and *u*, as the vowel of the second radical (see 52).

The passive thought as a temporary or accidental state takes *i*. In finishing this subjective thought of the process, whether active or passive, when there is no suffix the mind has a sense of it, when perfect as having passed from the subject, and when imperfect as still engaging the subject, so that the last vowel is in the perfect *a* and in the imperfect *u*.

The *y* which is given above as initial of the imperfect is the prefix of the third person singular masculine. In the simple form it takes up the vowel of the first radical, because in the imperfect the realisation is thought so intimately in the subject. But in the derived forms the idea of the stem being less simple tends to be more distinct from the subject, and this takes a vowel of its own, which in the non-reflexive forms of the active and all the passive is *u* to express the continuing engagement of the subject; but in the reflexive forms it is *a* on account of the transition to the reflex object. In the ninth and eleventh forms also it is *a*, for in these the verbal stem is thought as clinging to the subject, and the person has consequently the vowel which expresses reference to it.

The simple form, if it have *a* with the second radical in the perfect, has *u* or *i* in the imperfect, the former probably when a transitive action is thought in the imperfect within the subject as still springing from its native energy, the latter when the verb in the imperfect is thought as a temporary state of the subject. If the second radical have *i* in the perfect, the verb is thought in the perfect as being in its nature a temporary state, and this state is thought in the imperfect as passing, and the *i* becomes *a*. But if it be *u* the verb is thought in the perfect as a permanent state, and this abides also in the imperfect and *u* remains. Verbs whose second or third radical is a guttural retain in the imperfect the *a* which their second radical has in the perfect, the gutturals having an affinity for *a*, which is uttered more entirely in the throat than the other vowels.<sup>1</sup>

The derived forms being less capable, as has been said, of being thought immersed in the subject, are more superficially involved in it in the imperfect, and their second radical has *i* for its vowel. But in the reflexive forms in which the reflex object is not blended with the root the transition to it causes the second radical to take *a*.

The passive is a temporary state, and in the imperfect it is thought as passing from the subject, and consequently the *i* of the perfect is changed to *a* in the imperfect.

It is only in the third singular masculine of the perfect, which has no person element, that there is a third stem vowel expressive of the

<sup>1</sup> Wright, pp. 56, 57.

being or doing, as having passed from the subject. In the other persons the suffix of the person is subjoined to the third radical without an intervening vowel, the thought of the person itself as no longer engaged being such as to render this vowel unnecessary.

So also in the imperfect; it is only in those persons which have no suffix of the person that there is a third stem vowel expressive of the being or doing as still in the subject, this element in the other persons being replaced by the fragment of the person which is subjoined, the person being thought as still engaged.

The personal prefixes of the imperfect all take the same vowel as that of the third singular masculine.

55. There is a subjunctive mood in Arabic to express a fact as an aim, or object, or result, or concomitant condition of another fact<sup>1</sup> (74, Ex. 10, 15). It must in reference to the latter be future or contemporaneous, and cannot therefore be perfect, but is expressed as a modification of the imperfect. Its difference from the latter is two-fold; the final *u* of the imperfect, which expresses the act or state as still engaging the subject, is in the subjunctive changed to *a*, which expresses it abstracted from such present engagement; and the subjunctive having less vivid realisation in the subject, the suffixes of person are reduced by dropping their second syllable when they have one, for their first syllable sufficiently expresses their meaning. Negation so reduces the realisation of the future that the negative future is expressed by the subjunctive after the negative.<sup>2</sup>

There is also a jussive mood used also for what is a supposition or what depends on a supposition (74, Ex. 13) and for a fact thought as not in course of realisation yet, or not at a past time<sup>3</sup> (64). It drops the final *a* of the subjunctive, being thought with still less realisation in the subject than the latter (see 64). In the suffixed persons it is the same as the subjunctive. With the preposition *li*, to, prefixed, it is used for the imperative, generally in the third person.<sup>4</sup> A prohibition must be expressed by the jussive, as the imperative is always positive.<sup>5</sup>

The imperative, which is only in the active voice, the jussive being used for it in the passive, drops the personal prefix of the jussive with its vowel, and when this leaves two consonants at the beginning, a vowel must be prefixed, as two consonants cannot begin a syllable. This prefixed vowel is in the simple form *lu*-, when the second radical has *u*: there being then a strong sense of subjectivity. In the third or causative form it is *la*-, on account of the transitivity of causation; but in all other cases it is *li*, which is the vowel that is prefixed merely for euphony.

Both in the jussive and imperative of the ninth and eleventh forms, *i* is inserted for euphony between the third radical and the repetition of it.

From the jussive are formed two energetic forms, one with *-anna* suffixed to it, and the other with *-an*; and when the person ends in *-i* or *-u*, the *a* is elided, and the *i* or *u* is shortened as being in a shut syllable. In the dual, which ends in *-ā*, and in the second and third

<sup>1</sup> Wright, Syntax, p. 18-24.

<sup>2</sup> Ibid. p. 16.

<sup>3</sup> Ibid. p. 25-27.

<sup>4</sup> Ibid. p. 24.

<sup>5</sup> Ibid. p. 28.



plural feminine, whose final *a* coalesces with the initial *a* of the suffix into *ā*, the final *a* of the suffix of the first energetic is weakened to *i* by the strength of vowel utterance which *ā* absorbs, and the *n* of the second energetic begins a syllable and takes *i* to sound it.<sup>1</sup>

There are quadriliteral verbs, which are formed either from the repetition of a syllable expressive of sound or movement, or from the addition or insertion of a letter, generally a liquid or sibilant, in a trilateral verb, or as denominatives from nouns of four letters, some of them foreign words, or as combinations of the most prominent syllables or letters in certain very common formulas. They also admit three derived forms, as (1.) *qamṭara*, (2.) *taqamṭara*, (3.) *ḥiqmāṭara*, (4.) *ḥiqmaṭarra*. The second of these agrees in signification with the fifth of the trilateral verb; the third is intransitive; and the fourth is intransitive, intensive or extensive.<sup>2</sup> The four forms throughout their inflection follow respectively the second, fifth, seventh, and ninth forms of the trilateral verb.<sup>3</sup>

If the second and third radical of a trilateral verb be the same consonant, they tend to unite in a double consonant, instead of being repeated at the beginning of successive syllables.

And if any of the radicals be *h*, *w*, or *y*, they are variously absorbed by the vowels. But the irregularities caused in these two ways are merely euphonic.<sup>4</sup>

56. The Syro-Arabian verb tends to catch a sense of the persons affected objectively by the doing or being, and consequently to take a personal suffix of the object. These suffixes are the same as the possessive suffixes of the noun, except that the first singular objective is *-ni* and the first singular possessive is *-i*, which seems to indicate that the thought of self coalesces with what belongs to self more than with what affects self, so that it is more strongly felt as an additional element with the latter than with the former.

These suffixes, moreover, have no part in the vocalisation of the verb, and are therefore external to its unity, though there is a slight mingling sufficient to attach them as the mind passes to them.

A verb may take two object suffixes provided they are different from each other, the first being the direct object and the second the indirect, and the first person preceding the second on account of its superior interest, and the second person the third for the same reason. And if the more remote person is the direct object, then it is suffixed, and the other is expressed separately. The personal object may also be thought separately owing to emphasis. And in this case, as in the former, it is expressed by the possessive suffix attached to *ḥiyyā*<sup>5</sup> (Ethiop. *kīyā*), which seems to be a demonstrative element brought out by transition to the personal pronouns as objects and needed to give objective substance to them when used separately as objects on account of the subjectivity with which they are usually thought (see IV. 38, 84, 86, 116).

57. There is this essential distinction between the verb and the verbal substantive, that the being or doing is thought in the verb as

<sup>1</sup> Wright, Syntax, pp. 58, 59, 241.

<sup>3</sup> Ibid. p. 65.

<sup>4</sup> Ibid. p. 65-95.

<sup>2</sup> Wright, pp. 43-45, 240.

<sup>5</sup> Ibid. p. 103-105.

an affection of the life of the subject (Def. 11), but in the substantive as the fixed nature of a substantive object of thought (Def. 4), so that the process of being or doing, which in the verb is like a part of the fleeting consciousness of a subject, acquires when abstracted in a substance of its own the fixity of that substance. Hence probably arises the tendency of the Arabic verbal noun to lengthen that one of the vowels of the verbal stem, whose significance is most strongly involved in the substantive idea. Thus the noun of the agent thinks the action issuing from its source, and lengthens the first vowel, which expresses the first part of the thought of the process; the noun of the action generally thinks the action in its middle course, and lengthens the second vowel. But if the noun express the whole process of the act of state it will be thought with more of the movement of the verb, and there will be no such prolongation, and if it express the effect, then the sense of process, and therefore the vocalisation, will be reduced.

Moreover, the loss of movement in the noun as compared with the verb tends, it seems, to cause the being or doing to be thought as abiding in the subject, and consequently to make the vowels less open.

The third vowel of the verbal stem is suppressed by the substance of the noun which is thought at the end.

The verbal nouns of the simple verb have many different forms, but all these nouns cannot be formed from every verb. The majority of verbs admit of but one form, very few of more than two or three.<sup>1</sup>

The first five of the following forms are the most frequently used. The probable original significance of the various forms may be conjectured as follows:

(1.) *Faʿlun* is the form of the abstract noun of action of transitive verbs, the reduced vocalisation probably indicating that it is thought rather in the object or effect than in the subjective process; *-un* is the nominal termination in the nominative case.

(2.) *Fuʿālun* is the abstract noun of active intransitive verbs of the form *faʿʾala*. The loss of subjective movement causes the action to be thought as dwelling more deeply in the subject, so that *a* in both syllables becomes *u*.

(3.) *Faʿʾalun* is the abstract noun of intransitive verbs of the form *faʿʾila*. These are temporary states (52) thought in their whole process as they engage the subject; and with the second radical they take *a* like the imperfect of the verb to express the state as passing.

(4.) *Faʿʾālātun* and *fuʿʾūlātun* are abstract nouns of verbs of the form *faʿʾala*. These are permanent states or qualities of a subject (52); and being thought as nouns they take the feminine suffix to express them as subordinate appurtenances of the subject. Being thus connected with the subject they take *a* in their radical part, probably when thought in reference to the outer world, and *u* when thought as within the subject. Thus *sahala*, was smooth, makes *sahālātun* and *suhūlātun*, smoothness, ease.

(5.) *Fīʿālun* is the abstract noun of verbs of flight or refusal. The strength of the idea is the course of action in reference to an object, and the strength of this reference and the loss of subjective movement

<sup>1</sup> Wright, p. 110.

in the noun cause the verbal radical to be thought rather as pertaining to the subject than as issuing from it, so that the first vowel is changed from *a* to *i*.

(6.) *Fuġġūlun* is the abstract noun of verbs of change of place thought as an accidental condition (*i*) of the subject which has proceeded from (*a*) the subject. The same form is used for verbs of sound.

(7.) *Fuġġālun* is the abstract noun of sickness or ailment; the course of a passing condition (*a*) in which the subject is passive (*u*). The same form is used for verbs of sound.

(8.) *Faġġālūmn* is the form of nouns expressive of violent or continuous motion. The strong element is *an*, which probably expresses the doing with fixity in a substance.

(9.) *Fiġġālatun* is the form of nouns of office, trade, or handicraft. These are thought as subordinate appurtenances of the subject to whom the course of action belongs, and take the feminine suffix; and the course of action is thought rather as a potentiality belonging to the subject than an activity proceeding from him, so that the first *a* is changed to *i*.

If a verb has several different significations without change of form, it has often different abstract nouns, one peculiar to each meaning.

The *nomina verbi* are used both in an active and a passive sense, as *qatluhu*, his killing, or his being killed.<sup>1</sup>

(10.) In the second form of the verb (52), the course of the action is so increased by its intensity or its extension, that in the abstract noun the thought of the action in its beginning is weakened; and the subjective movement of the verb being lost in the noun, the action, instead of being thought as issuing from the subject, is thought as pertaining to it like a neuter, so that the first vowel is *i*, and the form of the noun is *fiġġīfālun*; or it is thought more (*a*) or less (*i*) as affecting the subject reflexively, so that the form of the noun is *taġġīfālun* or *tiġġīfālun*.

The course of the action of the second form of the verb may even be thought in the noun as a state affecting the subject reflexively with or without subordination to the subject as an appurtenance, so that the noun is *taġġīfālatun* or *taġġīfālun*; the feminine element attracting to itself the fixity of the substance, so that when it is taken the second vowel is not lengthened.

The reflexive element takes up the vowel of the first radical, and then the second radical cannot be repeated, as two consonants cannot begin or end a syllable.

(11.) In the third form of the verb, the effort or the reaching to the indirect object is more or less taken up by the course of the action when abstracted in a verbal noun, the first vowel being shortened in the former case and left long in the latter; and thought is thereby drawn from the beginning of the process, so that with the loss of subjective movement in the noun the sense of the process as issuing from the subject is lost, and the first *a* is reduced to *i*. *Fiġġālun* or *fīġġālun* is therefore the form of the noun.

Moreover, the doing or being may be thought in its whole process

<sup>1</sup> Wright, pp. 110, 111.

without taking into itself any fixity of the substance, but this being added in external elements. The subjective process of the verb becomes the attributive nature of the noun by prefixing the indefinite pronoun *n* with the subjective vowel *u*, and the substance takes the feminine element to make it a subordinate appurtenance of the subject.

*Mufāʿalatun* is then the form of the noun of the third form of the verb; and its meaning may be rudely expressed as what is the effort, &c., of the subject.

(12.) In the abstract nouns of the other forms of the verb, the course of the action thought as the principal part of the idea, and therefore lengthening the vowel of the second radical, weakens the sense of outgo from the subject, so that with the loss of subjective movement in the noun the preceding vowels are changed from *a* to *i*.

The noun of the sixth form, however, is *tafīʿūʿulun*, and that of the fifth may be *tafaʿūʿulun*,<sup>1</sup> in both which the course of the action, instead of being thought as the principal part of the substantive idea, which takes the fixity of the substance and gives length to the vowel of the second radical, is thought only with loss of subjective movement so as to change its vowel from *a* to *u*, without any weakening of the preceding vowels.

(13.) The quadriliteral verbs form their abstract nouns like those forms of the triliteral verb with which respectively they agree in their inflection.<sup>1</sup>

The nouns formed from verbs which have amongst their radicals *ḥ*, *w*, or *y*, are subject to euphonic irregularities like the verbs themselves.

(14.) Nouns which express the doing of an action once, if from the first form of the verb, are *faʿlatun*, if from the second form they are *tafīʿūʿlatun*.<sup>2</sup>

The feminine suffix indicates the subordination of a particular instance to the abstract noun of action. The feminine form of a general noun denotes an individual of the genus.<sup>3</sup>

(15.) *Fiʿlatun*<sup>4</sup> expresses a comparative, and therefore light thought of a kind of action belonging to the subject.

(16.) If the pronoun *ma* be substituted for *ya* in the imperfect third singular masculine, and the vowel of the second radical when it is *u* be changed to *a*, otherwise left unchanged, and the final *u* be changed to *un*, we shall have a nominal form which will mean what has the passing action or the accidental state; and it is used to express nouns of time and place. Thus from *ṣariba*, he drank, *yaṣrabu*, he is drinking, *maṣrabun*, time or place of drinking.<sup>4</sup>

The noun of time and place sometimes has the feminine suffix because it is thought as a subordinate appurtenance of the action.<sup>5</sup> But the idea of the action is then strengthened and the second radical generally has *u*, as in the imperfect of active verbs.

The noun of place, *mafiʿālatun* or *mafiʿālan*, formed from the stem of a substantive, and generally with the feminine ending, denotes a place where the substantive object is found in large quantities.<sup>3</sup>

<sup>1</sup> Wright, p. 112.

<sup>2</sup> Ibid. p. 117.

<sup>3</sup> Ibid. p. 133.

<sup>4</sup> Ibid. p. 118.

<sup>5</sup> Ibid. p. 121.

The nouns of time and place of the derived forms of the verb are identical in form with the *nomen patientis* or passive participle.<sup>1</sup> The strength of the verbal idea dominates the time or place, and makes it be thought as passive recipient.

(17.) The noun of the instrument is *miḥḥālun*, *miḥḥalun*, or *miḥḥalatun*.<sup>2</sup> The action belongs only proximately to the instrument, and therefore the first vowel is *i*. The first form takes up into the course of action the fixity of the substance, the third expresses the instrument as a subordinate condition. The noun of the instrument formed on the stem of a substantive denotes what contains the substantive object.<sup>3</sup>

(18.) The noun of the agent is *ḥāḥilun*,<sup>4</sup> in which the outgo from the subject as principal part of the idea has taken up the fixity of the substance, and lengthened the *a* of the first radical. The course of the action is lightly thought, so that with the loss of subjective movement in the noun, the vowel of the second radical becomes *i*.

The *nomen patientis* is *maḥḥālun*,<sup>4</sup> in which the verb is thought as *ḥāḥila* instead of *ḥāḥila*; that is, as if it were manifested by the subject (*a*), as a state dwelling in the subject (*u*), instead of being received by the subject (*u*) as a temporary state of the subject (*i*). The passive state is thought, not in its reception by the subject, but rather as belonging to the subject; it may be past or habitual, but in either case characterises the subject. The indwelling of it is the principal part of the idea, and takes up the fixity of the substance, so that *u* is lengthened; and the first vowel is taken up by the pronominal prefix *m*.

The verbal stems of the derived forms of the verb are so strong that they maintain themselves in the *nomen agentis* and *nomen patientis*, and do not take up the fixity of the substance. These nouns are therefore the same as the third singular masculine of the imperfect active and passive respectively, *m* being substituted for *y*, and *un* for the final vowel; except that in the *nomen agentis* *m* takes *u* in all the forms because there is less subjective movement than in the verb, and the second radical for the same reason takes *i* instead of *a* in the fifth and sixth forms.<sup>5</sup>

(19.) The forms of some of the adjectives differ from those of the verbs which have corresponding meanings, in their vocalisation being less fully expressive of the process; as if the verbs were derived from the adjectives by taking the appropriate vowels. Some adjectives differ from the verb in the perfect merely by having the nominal termination *un* instead of the final vowel of the verb. Other adjectives are formed from the verbs by lengthening a vowel, generally that of the second radical, as if with sense of the fixity of the substance to which the adjective belongs, and sometimes changing the vowels so as to be less expressive of the subjectivity or of the subjective movement. Some adjectives take a suffix *-ānun* or *-āmun*, dropping at the same time the vowel of the second radical, perhaps to express their abiding in a

<sup>1</sup> Wright, p. 122.<sup>2</sup> Ibid. p. 123.<sup>3</sup> Ibid. p. 134.<sup>4</sup> Ibid. p. 124.<sup>5</sup> Ibid. p. 129.

substantive object; as if their connection with it were not quite taken up into the idea of them. Others take a prefix like that of the causative form of the verb, dropping at the same time the vowel of the first radical, as if to express a sense of the quality as an external affection; but generally this prefix denotes an eminent degree of the quality as if it expressed a sense of an additional infusion of it.<sup>1</sup>

Adjectives of the forms *faḡḡilun*, *faḡḡlānu*, or *ḡaḡḡalu*, if the latter denotes a colour or deformity, are chiefly derived from neuter verbs *faḡḡila*, whilst neuter verbs *faḡḡala* generally give rise to adjectives of the form *faḡḡlun*, *faḡḡilun*.<sup>2</sup> The former are thought as accidental states (52), the second and third of them terminating in *u* like the imperfect, as if engaging a subject, instead of in *n* as belonging to a substance. The latter are permanent states (52), and the first of them has lost subjective movement, and the second has taken up the fixity of the substance, lengthening the vowel of the second radical, at the same time losing subjectivity as being an adjective and changing *u* to *i*.

*Faḡḡilun*, when derived from transitive verbs, has usually a passive sense; and the same is sometimes the case with *faḡḡūlun*: the sense of state less or more subjective taking up the fixity as the principal part of the idea. But these two forms, especially the latter, often indicate either a very high degree of the quality or an act done with frequency or violence,<sup>2</sup> the course of the being or doing thought as a state and as the principal part of the idea.

*Faḡḡālun* is an adjective of intensiveness or habit, corresponding to the second form of the verb, and it gets additional force of meaning from taking the feminine ending *-atun*; <sup>3</sup> because this implies, that the strength with which it is thought has partially detached it from its noun and given it a substantive nature (see the Sanskrit numerals). Other intensive forms less usual are *fuḡḡālun*, *fiḡḡilun*, *fuḡḡalatun*, *faḡḡūlun*, *fuḡḡūlun*.

Except the adjective of eminence *ḡaḡḡalu*, there is no form to express degrees of comparison.<sup>4</sup>

(20.) Adjectives are formed from substantives to denote connection with the substantive object, by subjoining *-iyyun* to the stem of the substantive after having dropped any ending of gender or number, and sometimes submitted to euphonic change. If the substantive be a proper name <sup>5</sup> compounded of two words, that one which is the more strongly thought takes *-iyyun*, and the other is dropped. The feminine of the preceding form, *-iyyatun*, denotes the abstract idea of the substantive on which it is formed.<sup>6</sup>

(21.) The form of the diminutive noun is *fuḡḡailun*, and in quadrilaterals *fuḡḡaiḡḡilun*,<sup>7</sup> in which the *u* perhaps expresses imperfect development of the nature, like the *u* of the imperfect of the verb, and *i* is an element of weakness, like the feminine *i*. The weakness

<sup>1</sup> Wright, pp. 125, 128.

<sup>4</sup> Ibid. p. 129.

<sup>2</sup> Ibid. p. 126.

<sup>5</sup> Ibid. p. 134-143.

<sup>7</sup> Ibid. p. 146.

<sup>3</sup> Ibid. p. 127.

<sup>6</sup> Ibid. p. 145.

falls on the part which expresses the continuing nature of the noun.

Proper names consisting of two words form their diminutives on the first word, the second remaining unchanged.<sup>1</sup>

58. In respect of gender Arabic nouns are divisible into three classes, those which are only masculine, those which are only feminine, and those which are both masculine and feminine.

That a noun is of the feminine gender may be assumed either from its signification or from its form.<sup>2</sup> The nouns which are feminine by signification denote substantive objects whose attributive nature (Def. 4) belongs properly to a feminine substance, and suggests this without expression; the nouns of feminine form are those whose attributive nature needs to be embodied in a feminine substance by an added element, that the noun may be feminine.

The nouns which are feminine by signification are those which belong to the female sex; those which signify countries or towns regarded as the mothers of their inhabitants; fire or wind, which are of a yielding nature; certain parts of the body, especially those parts which are double, for they are each more subordinate than the single ones; collective nouns which denote living objects destitute of reason, and which do not form a noun of the individual by means of the feminine suffix *-atun* (57), for collectives lose force with loss of individuality; and certain other nouns whose nature, though thought as feminine, cannot be brought under any feminine class.<sup>3</sup>

Nouns feminine by form are those which end in *-atun*, *-ai*, *-ā*, or *-āḥu*.

From most adjectives and some substantives of the masculine gender feminines are formed by subjoining one of the above endings.

The most usual termination, by the mere addition of which feminines are formed, is *-atun*.

Feminines in *-ai* or *-ā* are formed from adjectives of the forms *faḡlānu*, whose feminine is *faḡlai*, and *ḡaḡḡalu*, superlative, whose feminine is *ḡaḡḡai*.

Feminines in *-āḥu* are formed from adjectives of the form *ḡaḡḡalu*, which have not the comparative signification, whose feminine is *faḡlāḥu*.<sup>4</sup>

It is to be observed that adjectives of the form *faḡlānu* or *ḡaḡḡalu* differ from the others in not having the final *n*, which is characteristic of the noun; as if they had less sense of the substance to which they belong (57). And to this their meaning corresponds. For *faḡlānu* denotes an accidental state, being formed from verbs of the form *faḡḡila* (57); and is not quite thought as part of the idea of a substantive object, but in some degree as rather affecting such an object (129). And *ḡaḡḡalu*, with the superlative meaning, has a comparative reference to other objects which tends to draw thought from that which it qualifies. Adjectives of the form *ḡaḡḡalu*, which are not superlative, express colour or defect, thought as external accidents (57). These adjectives, having less sense of the substance, give

<sup>1</sup> Wright, p. 143.

<sup>2</sup> Ibid. p. 153.

<sup>3</sup> Ibid. p. 153-155.

<sup>4</sup> Ibid. pp. 157, 158.

weaker expression to it in the feminine as well as in the masculine. And as the weakly thought substance is less distinct, it blends with a less distinct element of gender, which is taken up partly by the adjective attribute; *faḡlānu* is weakened by dropping *-an*, which seems to connect attribute and substance, the weak substance and attribute of the feminine combining without such connection; and *ḡaḡḡalu* in the feminine drops the strong prefix *ḡa*-, which, like the causative of the verb, seems to express an access of the attribute as if from an external source. Does *faḡlai* convey a sense of passive reception in having *u* for the vowel of its first radical?

*Faḡḡūlun* when used adjectively with the meaning of the active participle, *faḡḡūlun* when used adjectively with the meaning of the passive participle, and *miḡḡālu*, *miḡḡālu*, *miḡḡūlun*, nouns of the instrument, when used adjectively to attribute strongly a property or action, as if the substantive was an instrument for its efficiency, do not make a feminine,<sup>1</sup> for they have a weak sense of the substance to which they belong. They are of so verbal a nature that they are not quite thought, like adjectives generally, as part of the idea of the subject which they qualify (Def. 6), but in some degree as only affecting it; and they have not a substance of their own like the *nomina agentis, patientis*, and *instrumenti*, which are substantives.

Adjectives which by their signification are applicable to females only, do not usually form a feminine,<sup>1</sup> for they receive no modification in idea from being used with a female substantive.

Collective nouns denoting animals or plants which are thought with such strength that they form a noun of the individual as a subordinate part, also the names of the letters of the alphabet and words regarded as words, and a considerable number of other nouns, are sometimes masculine and sometimes feminine.<sup>2</sup>

59. Arabic nouns have three numbers, singular, dual, and plural.

The dual is formed by *-āni* (51), subjoined to the stem after dropping *-un*; certain euphonic changes taking place if the stem ends in *y* or *w*.<sup>3</sup>

There are two kinds of plurals in Arabic; one which has only a single form for each gender, and is called by the grammarians the *pluralis sanus*, because the vowels and consonants of the singular are for the most part retained in it; the other, which has various forms, and is called the *pluralis fractus*, because it more or less alters the singular by the addition or elision of consonants or the change of vowels.<sup>4</sup>

The *pluralis sanus*, nominative case, of masculine nouns, is formed by adding *-āna* to the stem, *-un* having been dropped; that of feminine nouns by adding *-ātun* to the stem, or if the singular end in *-atun* by lengthening the *a*. In taking these endings, stems with final *y* or *w* are subject to certain euphonic changes. And if the middle radical of feminine nouns has no vowel in the singular, it takes in the plural either *a* or the vowel of the first radical.<sup>5</sup>

<sup>1</sup> Wright, p. 159.

<sup>2</sup> Ibid. pp. 155, 156.

<sup>3</sup> Ibid. p. 160.

<sup>4</sup> Ibid. p. 161.

<sup>5</sup> Ibid. p. 161-163.



The *pluralis sanus* masculine is formed—

From proper names of men, not ending in *-atu*, their diminutives, and the diminutives of common nouns denoting rational beings.

From verbal adjectives which form their feminine in *-atun*.

From adjectives of the form *ḥaḥīḥatu*, which have the comparative or superlative signification.

From adjectives in *-iyyun*.

From the words *ḥibnan*, for *banayun*, a son, plural *banūna*; *ḡālamun*, one of the four classes of created things, plural *ḡālamūna*; *ḥardun*, the earth, plural *ḥaradūna*; *ḥahlun*, a family, plural *ḥahlūna*; *ḡū*, the possessor of a thing, plural *ḡūuna*; and from the numerals for the tens from 20 to 90.

All the above have, in the singular, a definiteness of idea, and corresponding distinctness of substance (Def. 4).

Adjectives, however, have the *pluralis sanus* only when joined to substantives denoting rational beings. With other nouns they have less strength of individuality.

*Plurales fracti* also are formed from substantives and adjectives that have the *pluralis sanus*, but especially from adjectives used substantively, as these have less individuality.

Some feminine nouns, especially those which have dropped a third radical *h*, *y*, or *w*, have a *pluralis sanus* masculine, with elision of the termination *-at*,<sup>1</sup> having apparently lost in the plural the sense of subordinateness which they had in the singular.

The *pluralis sanus* feminine is formed—

From proper names of women, and such names of men as have the termination *-atu*.

From feminine adjectives whose masculine has the *pluralis sanus*.

From feminines in *-ai* or *-āḥu*.

From the names of the letters, which are generally feminine.

From the names of the months.

From the feminine verbal nouns and all verbal nouns of the derived forms; but those of the second and fourth derived forms admit also a *pluralis fractus*.

From nouns of foreign origin, even when they belong to men. These suggest only the thought of the object or substance, but in the plural that thought is reduced to what is common to the individuals, and is thereby so weakened as to be feminine.

From a good many masculine nouns which have no *pluralis fractus*, and some feminine nouns which have not a feminine termination.

From verbal adjectives which are used in the plural as substantives, and from non-rational diminutives, even when masculine.<sup>2</sup>

All the above have a distinct sense of the singular substance, but the reduction of the stem in the plural to what is common to the individuals weakens some masculines, so that their plural is thought like that of feminines.

The more usual forms of the *pluralis fractus* of substantives and adjectives with three radicals are the following, with the corresponding singular forms:

<sup>1</sup> Wright, p. 164.

<sup>2</sup> Ibid. p. 164-166.

Pluralis Fractus.	Singular.
1. <i>fuḡʾalun</i>	<i>faḡʾlatun, fiḡʾlatun</i> (rare), <i>fuḡʾlatun, fuḡʾlai</i> .
2. <i>fuḡʾlun</i>	<i>ḡaḡʾʾalu</i> , not comparative or superlative; its feminine, <i>faḡʾlāḡu</i> .
3. <i>fuḡʾulun</i>	<i>faḡʾalun, faḡʾilun</i> (rare), <i>faḡʾālun, fiḡʾālun, fuḡʾālun, faḡʾīlun, faḡʾīlatun, faḡʾūlun</i> .
4. <i>fiḡʾalun</i>	<i>fiḡʾlatun</i> .
5. <i>fiḡʾālun</i>	<i>faḡʾlun, fiḡʾlun, fuḡʾlun, faḡʾlatun, fuḡʾlatun, faḡʾalun, faḡʾalatun, faḡʾulun</i> ; also the verbal adjectives <sup>u</sup> <i>faḡʾlun, faḡʾlānun, faḡʾlānu, faḡʾīlun</i> not passive, and their feminines, and <i>faḡʾilun</i> , verbal adjective.
6. <i>fuḡʾūlun</i>	<i>fāḡʾlun, fiḡʾlun, fuḡʾlun, faḡʾalun, fiḡʾalun, fāḡʾīlun</i> , verbal adjective (rare).
7. <i>fuḡʾʾalun</i>	<i>fāḡʾīlun</i> , verbal adjective; its feminine, <i>fāḡʾīlatun</i> .
8. <i>fuḡʾʾālun</i>	<i>fāḡʾīlun</i> , verbal adjective.
9. <i>faḡʾalatun</i>	<i>fāḡʾīlun</i> , verbal adjective, denoting rational beings.
10. <i>fuḡʾalatun</i>	<i>fāḡʾīlun</i> , same derived from verbs with <i>w</i> or <i>y</i> for third radical.
11. <i>fiḡʾalatun</i>	<i>faḡʾlun, fiḡʾlun</i> (rare), <i>fuḡʾlun</i> .
12. <i>fiḡʾlatun</i>	<i>faḡʾlun, fuḡʾlun, faḡʾalun, faḡʾālun, fuḡʾālun, faḡʾīlun</i> .
13. <i>ḡaḡʾʾulun</i>	<i>faḡʾlun, faḡʾalun, fiḡʾlun, fuḡʾlun</i> , feminine quadriliteral, not ending in <i>-at</i> , with radically long vowel to second radical.
14. <i>ḡaḡʾʾālun</i>	triliterals of all forms, but rarely <i>faḡʾlun</i> and <i>fuḡʾlun</i> ; <i>fāḡʾīlun, faḡʾīlun</i> (rare).
15. <i>ḡaḡʾʾīlatun</i>	<i>faḡʾlun fiḡʾlun fuḡʾlun</i> (rare), <i>faḡʾalun</i> (rare), nouns with radical long vowel to second radical.
16. <i>faḡʾāḡīlu</i>	<i>fāḡʾalun; fāḡʾīlun</i> , substantive, also masculine verbal adjective (rare), also verbal adjective with signification applicable only to females; <i>fāḡʾīlatun</i> .
17. <i>faḡʾāḡīlu</i>	feminines with vowel of second radical, radically long, with or without <i>-atun</i> .
18. <i>fiḡʾlānun</i>	<i>fuḡʾlun</i> from roots having <i>w</i> for second radical, <i>faḡʾalun, fuḡʾalun, fuḡʾālun, fāḡʾīlun</i> (rare).
19. <i>fuḡʾlānun</i>	<i>faḡʾlun, faḡʾalun, faḡʾīlun, fāḡʾīlun</i> verbal adjective used as substantive, <i>ḡaḡʾʾalu</i> not comparative.
20. <i>fuḡʾalāḡu</i>	<i>faḡʾīlun</i> , verbal adjective, applicable to rational beings and not passive, <i>fāḡʾīlun</i> , some masculine adjectives rational not passive.
21. <i>ḡaḡʾʾīlūḡu</i>	<i>faḡʾīlun</i> , masculine adjective like preceding, derived from verbs whose middle radical is <i>y, w, or double</i> .
22. <i>faḡʾlai</i>	<i>faḡʾilun, faḡʾīlun, fāḡʾīlun, ḡaḡʾʾalu</i> , being verbal adjectives of injury, defect, &c., <i>faḡʾlānu</i> .
23. <i>faḡʾālīn</i>	<i>faḡʾlāḡu, faḡʾlai, fiḡʾlai, fuḡʾlai</i> feminine adjective.
24. <i>faḡʾālīyu</i>	same as 23, <i>faḡʾlānu, faḡʾīlun</i> , verbal adjectives, <i>faḡʾīlatun</i> , feminine substantives from verbs with third radical <i>y or w</i> .

Pluralis fractus.	Singular.
25. <i>faḡḡ ilun</i> (rare)	<i>faḡḡ lun, faḡḡ alun, faḡḡ ilun.</i>
26. <i>faḡḡ ūlatun</i> (rare)	<i>faḡḡ lun.</i>
27. <i>faḡḡ alātun</i> (rare)	<i>faḡḡ alun, faḡḡ ilun.</i>
28. <i>faḡḡ alun</i> (rare)	<i>faḡḡ latun, faḡḡ alātun, faḡḡ ilun.</i>
29. <i>faḡḡ lun</i> (rare)	<i>faḡḡ ilun.</i>

Quadriliteral substantives and adjectives, with four radicals, or formed from trilateral roots by prefixing *h*, *t*, or *m*, have a *pluralis fractus* of the form *faḡḡālil*.

Quinqueliterals, of which the penultima is a long radical vowel, have *pluralis fractus faḡḡālilu*.

Substantives and adjectives of five or more letters, generally of foreign origin, of which the penultimate is a long radical vowel, or of four or more letters without long radical vowel, have *pluralis fractus faḡḡālilatun*.<sup>1</sup>

The above correspondences between forms of the *pluralis fractus* and forms of the singular are subject to many exceptions. The dictionaries also give many forms which have not been noticed in the above table.<sup>2</sup>

Many forms of the *pluralis fractus* seem to be derived from obsolete forms of the singular, as *faḡḡalūhu*, plural of *faḡḡ ilun*, from an obsolete *faḡḡ ilun*.<sup>2</sup>

One singular may have several forms of the *pluralis fractus*; as *baḡrun*, the sea, *baḡḡrun*, *buḡḡrun*, *ḡabḡrun*; *ḡābulun*, a slave, *ḡībābulun*, *ḡābidun*, *ḡaḡḡbadun*, *ḡābdānu*.

One singular may have several *plurales fracti* and a *pluralis sanus* besides. And in such cases, if the singular has several meanings, it often happens that each of them has one or more forms of the plural which are peculiar to it or used in preference to the rest; as *baitun*, a house, plural generally *bayūtun*; *baitun*, a verse, plural always *ḡabyātun*; *ḡāinun*, an eye, plural generally *ḡuyūnun* or *ḡaḡḡyunun*; *ḡāinun*, a fountain, plural the same; *ḡāinun*, a peculiar nature, *ḡaḡḡyūnun*; *batnun*, the belly, a valley, a tribe, plural generally *batūnun* or *ḡabtūnun*; *batnun*, the interior, plural *batnūnun*.<sup>3</sup>

“As regards their meaning, the *plurales fracti* are totally different from the sound plurals; for the latter denote several distinct individuals of a genus, the former a number of individuals viewed collectively, the idea of individuality being wholly suppressed.

The *plurales fracti* are consequently, strictly speaking, singulars with a collective signification, and often approach in their nature to abstract nouns. Hence, too, they are all feminine, and can be used as masculine only by *constructio ad sensum*.”<sup>4</sup>

And being a singular noun, the *pluralis fractus* sometimes admits the formation of a plural from it.<sup>5</sup>

<sup>1</sup> Wright, p. 166–187.

<sup>2</sup> Ibid. p. 182.

<sup>3</sup> Ibid. p. 183.

<sup>4</sup> Ibid. p. 189.

<sup>5</sup> Ibid. p. 188.

"The *pluralis sanus* and the *plurales fracti* of the twelfth, thirteenth, fourteenth, and fifteenth forms are used only of persons and things that do not exceed ten in number (three to ten). But this applies of course only to such nouns as have also other plurals, for if one of the forms alone be used, it is necessarily employed without any limitation as to number."<sup>1</sup>

The formation of the plural of Arabic nouns is a remarkable and instructive feature of the language. Only a limited portion of the nouns form the *pluralis sanus*, expressing thereby a sense of the manifold individuality; and many of these, if not the most, form it only when the individuals do not exceed ten; the individuals, if they exceed ten, being lost in an aggregate. The *pluralis sanus*, as its name implies, preserves that part of the noun which expresses in the singular its attributive nature; and in the masculine the plural ending is external to the stem. But in the feminine the plural element enters into the stem, lengthening the *a* which belongs to its final syllable. And also feminine nouns whose middle radical has no vowel in the singular, suffer extension in the *pluralis sanus* by taking a vowel with that radical. The individuality of a feminine is weaker than that of a masculine; and it is natural therefore that it should be less distinctly preserved in a plurality. In the *pluralis fractus* the individuality is lost, yet not so completely as in a collective noun. The latter is thought with an attributive nature which is irrespective of the different individuals. The former is thought with the attributive nature altered by the individual to which it belonged being merged in an aggregate. The sense of multiplicity or repetition not being preserved in the substance (Def. 4) tends to be taken up by the attributive nature; and various stems are variously altered by such repetition, according to the idea which they express. It is not possible to account for the changes; but it may be said generally that the attributive nature is thought less strongly when it is merged in a large aggregate, because it is weakened by the different manifestations of it in different individuals. And to this may perhaps be attributed the tendency of the *pluralis fractus* to weaken to *i* or *u* the *a* of the singular stem, and sometimes to take the feminine ending when there is sufficient sense of the individual to bring out the weakness of the plural as subordinate to it. But there are other changes of quite a different nature which may concur with the preceding. The repetition of the attributive nature in different individuals seems often to give a sense of extension which shows itself sometimes in an increase of syllables, and more open vocalisation, and sometimes in a lengthening of vowels. In others the repetition seems to have the effect of doubling the middle radical. The twelfth, thirteenth, fourteenth, and fifteenth forms are especially worthy of note, because they are generally limited, like the *pluralis sanus*, to pluralities not exceeding ten individuals. The twelfth form is reduced in the stem, and subordinated by the feminine ending, and involves no expression of increase; and perhaps such an expression of

<sup>1</sup> Wright, p. 189.

plurality, with sense of subordination to the individual, would not be compatible with a larger number than ten. The other three forms have an external element in the prefix *ha*, as if there were a partial separation of an element of plurality, which would imply a corresponding distinctness of the thought of the individual which could take place only with a small number. The *ha* of the twenty-first form is perhaps due to the weak or doubled middle radical combining with the first radical. All such explanations, however, of the various forms are mere guesses.

The Ethiopic formations (130) seem to depend mostly on the extension of the stem by additional vocalisation. What is certain is the weak sense of the individual object, which is disclosed by the great development and use of the *pluralis fractus*.

60. Arabic nouns are declined in the singular either as triptotes or diptotes, but in dual all agree; and in the plural the only difference is that of masculine and feminine *pluralis sanus*. The case endings are:

	Singular.			Pluralis sanus.	
	triptotes.	diptotes.	dual.	masculine.	feminine.
Nominative . . . . .	- <i>un</i>	- <i>u</i>	- <i>āni</i>	- <i>ūna</i>	- <i>ātun</i>
Genitive, dative, ablative	- <i>in</i>	}	- <i>aini</i>	- <i>īna</i>	- <i>ātin</i>
Accusative . . . . .	- <i>au</i>				

The expression of the subject with a case ending appropriated to it is a notable feature in Arabic. Yet it is a weak sense of subjectivity that the nominative ending expresses; for when a dependent verb is expressed as a verbal noun, its subject is often in the nominative (74, Ex. 20), though oftener in the genitive.<sup>1</sup> In such a use of it there is no subjective realisation (Def. 13); but only a thought of the subject as the seat or source of the fact (67). It is only when the nominative follows the verb that it is thought properly as subject; when it precedes, as it may from emphasis or special strength of idea,<sup>2</sup> it is thought as that of which the fact is stated,<sup>3</sup> as *māta Zaidun*, Zaid is dead; but *Zaid'un māta*, Zaid he is dead; *Zaid'un mata ḥabūhu*, Zaid his father is dead.<sup>4</sup>

Dual and plural nouns as objects of a relation are less distinct than the singular, and the relations to the former are consequently less distinctly thought than the relations to the latter, so that all nouns are diptote in the dual and plural. The two individuals also confuse the sense of subject in the dual, so that the subjective vowel *u* does not appear in the nominative dual; but in the plural the individuals coalesce more than in the dual, and the sense of subject is strong enough to get expression. The general relation to the diptote nouns in the singular is the element of transition *a*; but dual and plural nouns prefer the element of proximity *i*. Transition is thought as having only one direction; proximity can exist with many objects.

The *pluralis fractus* is declined as a singular noun triptote or diptote<sup>5</sup> (59). The diptote nouns are apparently those of which the idea is so strong that in the conception of the fact they partially detach themselves from the combination in which they stand, so that their

<sup>1</sup> Wright, Syntax, p. 42.

<sup>2</sup> Ibid. pp. 180, 185, 186.

<sup>3</sup> Ibid. pp. 177, 178.

<sup>4</sup> Ibid. p. 180.

<sup>5</sup> Wright, p. 190-193.

connection with it is weakened. They are the quadrisyllabic *plurales fracti* (16 and 17), which have inserted a syllable between their first and third radicals, thereby expressing an extended thought of the stem; distributive numerals expressing as they do so heavy an idea, as two by two, three by three, &c.; nouns and adjectives, whether *plurales fracti* or not, which end in *-āhu*, *-ai*, or *-ā*, and their *pluralis fractus* (23); also the adjectives *ḥafīʿālu*, *faʿīlūnu*; these all have, as already noted, weak sense of substance (58), as if the stress of thought was on the stem and little on their outward connections. Also those proper nouns which not only tend, by their own concrete and independent nature as proper, to be less immersed in the combination of fact, but which also suggest by their formation a fulness of original meaning on which the mind would dwell. Their concreteness is increased when they are of foreign origin, because they are then more strictly limited to individuals; and their form invites attention when similar to that of native words with full meaning. Such are foreign names of men which are not monosyllabic, names of women which are of foreign origin or consist of three or more syllables, names which have a feminine termination or the termination *-ānu*, names which are like an imperfect, or which have the form of the second derived form or passive of a verb (*faʿīʿāla*, *fuʿīla*), names which are actually or seemingly derived from common nouns or adjectives.<sup>1</sup>

Stems ending in *y* or *w* are subject to irregularity in their declension owing to euphonic change.<sup>2</sup>

If a noun, whether of itself diptote or triptote, have the article, it is declined as a triptote, but does not take the final *n* in the singular or in the *pluralis sanus* feminine (74, Ex. 4, 7, 11, 12, 18); and if it govern a genitive it is declined as a triptote, and drops not only the final *n* in the singular and *pluralis sanus* feminine, but also the final *ni* of the dual, and the final *na* of the *pluralis sanus* masculine.<sup>3</sup> Triptote proper names drop the final *n*, when followed by *ḥibnu*, son of; <sup>3</sup> and *ḥibnu* is shortened to *bnu* <sup>4</sup> (74, Ex. 2).

The particularisation with the article and the correlation with the genitive draw thought from the attributive part of the substantive idea, which is the general part of it (Def. 4), and cause the noun to be thought more in its present instance as involved in the combination of fact. This strengthens the sense of the case relations, and leads the noun to be thought in the combination of fact without the help of any mediating pronominal element, so that final *n* is dropped in the singular and in the *pluralis sanus* feminine.

61. For that the final *n* of triptote nouns singular, or of the *pluralis sanus* feminine, is of a pronominal nature, is rendered probable by its being displaced by particularisation whether with the article or with a genitive; and that it helps the connection of the noun with the fact, by referring to it as connected, is indicated by its not being used when the sense of that connection becomes stronger in the thought of the noun, or the connection itself is weakened by the concreteness of diptote nouns singular. Otherwise the element of case is not sufficient

<sup>1</sup> Wright, p. 196-199.

<sup>2</sup> Ibid. p. 200.

<sup>3</sup> Ibid. p. 201-203.

<sup>4</sup> Ibid. p. 21.

to express the connection of the noun as that connection is thought in the conception of the fact; and *n* is used to supplement it. If this be so it is an arthritic element (Def. 7) such as has been observed in so many languages (II. 33, 77, 88, &c.; III. 3, 103; IV. 11, 71; V. 24, 32; VI. 144).

62. But the final *na* of the *pluralis sanus* masculine differs from the final *n* of the *pluralis sanus* feminine in involving a sense of the plurality. For even if it be partly due to the tendency of the language to avoid shut syllables with a long vowel, such as *ān* would be, yet the distinction between *-na* of the plural and *-ni* of the dual implies a sense of number (51). They are, however, both probably to be regarded as pronominal like *n*, and being so, they act arthritically; they are both dropped when the noun is correlated with a genitive on account of the closeness of that relation.

With the pronominal possessive suffixes also, the final *n*, *ni*, and *na* of the nouns are dropped; and the final vowel of a *pluralis fractus* or of the *pluralis sanus* feminine is elided before the suffix of first singular *-ī*.<sup>1</sup>

63. The cardinal numbers for 1 and 2 in Arabic agree in gender with the noun which they affect, and the numeral for 2 has the dual ending. They are light thoughts, which take up, like adjectives, a strong sense of the noun. The numerals from 3 to 10 are singular substantives, either following the noun in apposition to it, or governing the noun in the genitive and followed by it.<sup>2</sup> In the latter case the noun is in the *pluralis fractus*,<sup>3</sup> because the plurality is massed into an aggregate. In either case the numeral takes the feminine form when it is connected with a masculine noun, *i.e.*, whose singular is masculine, and which is not governor of a genitive denoting a female object;<sup>4</sup> because then and then only it is thought as a subordinate appendage. The mental action of counting feminines is greater because their individuality is weaker (59) and less readily noted as the unit, and the number of them consequently is a stronger thought. The numerals for 1 to 10 are declined as triptotes; for, owing to their abstractness, they have the more distinct sense of correlation with the rest of the fact.

The numbers from 11 to 19 are expressed by the units followed by the 10, and the 10, which, when it is by itself, is feminine with masculine nouns, in these numbers agrees in gender with the noun.<sup>5</sup> This is probably due to the compression of thought in reckoning, whereby the 10 having been reckoned takes up a strong sense of the noun in being carried on and added to the remainder. With both the 10 and the units, the noun is connected as with a diptote genitive of apposition, so that they both end in *a* (66).

The cardinal numbers from 20 to 90 are abbreviated expressions of so many tens, and they engage thought too much to be felt as subordinate appurtenances, so that they are always masculine *pluralis sanus*, the tens being too distinct to be massed into a *pluralis fractus*.

<sup>1</sup> Wright, p. 204.<sup>2</sup> Ibid. p. 206-208.<sup>3</sup> Ibid. Syntax, p. 161.<sup>4</sup> Wright, p. 207; Syntax, p. 166.

the abbreviation of counting the multiples above 20, the stem of the 10 was dropped, and only its plural ending remained ; but in 20 the stem of the 10 remained and took up with its first radical the *i* of duality, dropping the rest of the numeral for 2. It is remarkable, however, that the numeral for 20 has not the dual ending but the plural, the sense of the plurality of the number overpowering that of the duality of the tens.<sup>1</sup>

The numerals from 20 to 90 take the noun after them in the accusative singular, being too heavy to combine with them in the nearer relation of the genitive. Sometimes, however, the noun follows them in the genitive, and then, like other nouns (62), they drop the final *na*.<sup>1</sup> Multiples of 100 govern the noun in the genitive singular.<sup>2</sup>

Units and multiples of 10 are united by *wa*, and ; both being declined,<sup>1</sup> as they are thought substantively.

The ordinals of 2 to 10 affect the first radical of the cardinal with *ā*, dropping an initial *elīf* (*ha*, *hi*), and change the vowel of the second radical to *i*.

The ordinals 1 to 10 are declined.

In the ordinals of 11 to 19, the units take their ordinal form, but the 10 remains the same as in the cardinals ; and the unit ordinals are declined when defined by the article.

The ordinals of the multiples of 10 are the same as the cardinals.<sup>3</sup>

The distributive adjectives two by two, &c., are expressed by repeating the cardinal numbers once, or by numerals of the form *fuḡḡālu* and *maḡḡālu*, either singly or repeated.

The multiplicative adjectives double, threefold, &c., are expressed by *nomina patientis* of the second form *mufaḡḡālu*, derived from the cardinal numbers.

Nominal adjectives expressing the number of parts have the form *fuḡḡāliyun*.

The fractions from a third to a tenth have the forms *fuḡḡun*, *fuḡḡulun*, and *faḡḡilun*.

A recurrent period, as every third, is expressed in the form *fiḡḡlun*.<sup>4</sup>

64. There are in Arabic four inseparable prepositions, *bī*, in ; *lī*, to ; *ta* and *wa*, by, used in swearing ; and six separable prepositions, *ilā*, to ; *ḡattai*, till, up to ; *ḡan*, from ; *fī*, into ; *ladun ladai*, with ; *min*, of, from ; and there are also nouns used for prepositions.<sup>5</sup> All the prepositions govern the genitive.

The inseparable conjunctions are, *wa*-, and ; *fa*-, and so, and consequently.

The most common separable conjunctions are, *ḡiḡ*, *ḡiḡā*, when ; *ḡammā* followed by *fa*, as regards ; *ḡan*, that ; *ḡin*, if ; *ḡanna*, that ; *ḡau*, or ; *ḡumma*, *ḡummata*, then ; *kai*, in order that ; *lākiinna*, but ; *lammā* postquam ; *lau*, if ; *mī*, as long as.<sup>6</sup>

There are three inseparable adverbial particles, *ḡa*- interrogative, *sa*-prefixed to the imperfect of the verb to express real futurity, and *la*-affirmative.<sup>7</sup>

<sup>1</sup> Wright, p. 209.

<sup>2</sup> Ibid. Syntax, p. 164.

<sup>3</sup> Wright, pp. 211, 212.

<sup>4</sup> Ibid. pp. 213, 214.

<sup>5</sup> Ibid. p. 224-227.

<sup>6</sup> Ibid. p. 231-234.

<sup>7</sup> Ibid. p. 227.



There are three negative particles ; *lā* negatives what is thought as only part of a fact, being connected by *wa* with another verb, also the ideal, namely, the future, the indefinite present, which is thought irrespective of position in time, and the jussive, which it makes prohibitive ; *mā* negatives the real, namely, the definite or absolute present, and the perfect ; *lam* negatives the ideal-real, namely, the present of past time, expressed by the jussive (74, Ex. 9, 12), whose want of the final vowel gives unreality to the imperfect or incomplete tense. There are also two compound negatives, *lām* compounded of *la*, and the demonstrative *n* pointing to a fact as an object or result, and which consequently negatives the subjunctive ; and *lammā* not yet, compounded of *lam* and *mā* denoting duration, which, like *lam*, is followed by the jussive (55 ; 74, Ex. 10, 11).

65. The small sense of position in time, together with a considerable sense of process, leads the Arabic mind to think facts, not as placed in the past, present, and future, but as completed or not completed (74, Ex. 10, 18), the latter as incomplete being either a present or a future. This involves the necessity of determining their successions, not by the time of each, but by concatenating them as complete or incomplete at the time of the fact last mentioned (79). Thus the perfect is expressed by a perfect following another perfect (74, Ex. 1) ; an imperfect following a perfect denotes an act or state which was future or present in the past (74, Ex. 6, 7), and a perfect following an imperfect may denote what will be past in the future. Sometimes the first of the two verbs is the perfect or imperfect of the verb *kāna*, was ; and is immediately followed by the other so as to express a corresponding tense by the help of *kāna* as an auxiliary<sup>1</sup> (74, Ex. 2, 8). The *nomen agentis* and *nomen patientis* involve no thought of position in time.<sup>2</sup>

66. There is a striking weakness of comparative thought in Arabic, in consequence of which those qualifying elements which result from the comparison of a particular with a general are not thought as adjectives or adverbs (Def. 6, 17), with a sustained act of comparison, in which the general is present to the mind when completing with a comparative element the thought of the particular. But the mind having made the comparison by thinking the general side by side with the particular, passes from the general and thinks the comparative element as an entire object of thought (Def. 4), connecting it in a correlation with the general to complete the thought of the particular. Hence there is a small number of adjectives in Arabic, and a noun is often qualified by the genitive of another noun

where in other languages an adjective would be employed, as *ragul*<sup>man</sup> badness gen.

*saūh* · *in*, man of badness, for bad man.<sup>3</sup> So, too, the place of an adverb is apt to be supplied by a noun in the accusative (74, Ex. 11, 16, 18) ; the accusative in Arabic denoting either that to which an action tends as its object, or in reference to which a fact is realised, or that according to which a being or doing proceeds as its manner or kind.<sup>4</sup>

This habit of expressing a quality as a governed noun leads some-

<sup>1</sup> Wright, Syntax, p. 1-15.

<sup>2</sup> Ibid. p. 130.

<sup>3</sup> Ibid. p. 137.

<sup>4</sup> Ibid. p. 30.

times to the expression in a similar way of what in other languages would be an apposition; <sup>1</sup> the object denoted by the first substantive not being retained as identical with the object which is denoted by the second, but correlated with it as belonging to it, or participating of it, as *ṭuru sinīna*, Mount Sinai.<sup>2</sup>

The noun which is used in the adverbial accusative with a verb may be a verbal noun derived from itself; either its own abstract noun (*nomen actionis*) or the noun which expresses a single realisation of it, or the noun which expresses the kind of its realisation. The first by itself expresses intensity of the verb (74, Ex. 18), and with an adjective or defining element qualifies or defines the verb (74, Ex. 19); the second and the third are used respectively for enumeration and specification.<sup>3</sup> All three show a want of comparison, as they do not qualify the verb with a truly comparative element, but supplement it with a second thought of what it denotes (see III. 8).

The adverbial accusative is used after verbs of being or becoming where Latin uses the nominative (74, Ex. 8, 21, 22). It is also used to designate time, place, state, or condition of subject or object, cause or motive, and various other determinations and limitations of the verb; and if the limitation be another fact, the verb of the latter may become the abstract noun in the accusative, and its subject will follow it in the nominative.<sup>4</sup>

The accusative is used also after the negative *lā*, meaning there is not; and the noun when taken indefinitely drops the final *n*.<sup>5</sup>

67. The abstract verbal noun, when governed in the objective accusative, or through a preposition, by another verb, may govern its own object in the genitive (74, Ex. 2) unless this be separated from it by one or more words, when it must be put in the accusative. If its subject be expressed it is generally genitive, and the object accusative; but often the subject is nominative when the object is a pronoun in the genitive, and sometimes the subject is nominative and the object accusative<sup>6</sup> (74, Ex. 20).

The *nomen agentis*, when it has a strong sense of process like the imperfect, may govern an object in the accusative.<sup>7</sup> It is probably the strong sense of process which causes the verbal nouns so often to have a subject and to govern an accusative; the former being the source, and the latter the end or determinant of the process of doing or being.

68. As the weakness of the act of comparison shows itself in the mind dropping the general idea when it passes to the comparative element which distinguishes the particular object of thought, so the weakness of the act of correlation shows itself in the weak sense of the antecedent which the mind has in thinking the consequent. Hence arises the strange peculiarity in Arabic that the consequent in a correlation is often expressed as such without any expression being given to the antecedent.

Thus it has been already mentioned (55) that the imperative is sometimes expressed by the jussive with the preposition *li*, to, prefixed

<sup>1</sup> Wright, Syntax, p. 158.

<sup>2</sup> Ibid. p. 159.

<sup>3</sup> Ibid. p. 37-40.

<sup>4</sup> Ibid. p. 75-80.

<sup>5</sup> Ibid. pp. 68, 69.

<sup>6</sup> Ibid. pp. 41, 42.

<sup>7</sup> Ibid. p. 46.

to it (74, Ex. 14), the antecedent of this relation, namely, the impulse of command, being left unexpressed. So also the objects of a strong direction of thought, as in praise, blame, welcome, warning, strong address, are apt to be put in the accusative without any word to govern them. And propositions introduced by *hinnā*, certainly, or the conjunction *hanna*, that, which are both of a demonstrative nature, or by conjunctions compounded of these without restrictive *-mā*, have their subject put in the accusative<sup>1</sup> without anything to govern it except the directed attention which a demonstrative involves (Def. 7; 74, Ex. 3, 9, 11). This construction gives a further illustration of the same principle; for the verb has no expressed antecedent with which as subject it is correlated except whatever element of person it may contain.

69. The Arab (chap. i. V. 5) has, as compared with other races, small practical interest in external things; doing or being as thought in its own subjective process has more attraction for him. And he tends to think the noun weakly in its connections with the fact, and rather in the general idea of it than in the particular instance which has those connections (60). He has a weak sense of the individual object or substance (59); and in consequence of this when a substantive object is thought as part of another, its substance is merged in that other. The substantive thus governing another in the genitive, and thought as part of that other, loses its generality, the idea of it being limited to what is part of the other object. It is particularised by the genitive, and consequently thought more in its present instance and present connections in the fact (60). The governing substantive thus becomes triptote, but loses the final *n*, *ni*, or *na*,<sup>2</sup> which expresses it as the object of attention (61, 62). If, however, the relation expressed by the genitive be not quite so close as that of a part to a whole, as when the genitive is governed by an adjective or by a participle not thought substantively, and which cannot therefore be part of a substantive object, the genitive does not define or limit its governor;<sup>3</sup> and the latter consequently, if it is to be limited, takes the definite article.<sup>4</sup> But always the governor drops the final *n*, *ni*, or *na* (74, Ex. 2, 3, 8, 16), and the genitive follows it immediately.<sup>5</sup>

The close connection of the governing noun with the genitive is called by the Arab grammarians the proper annexation, the other the improper annexation.<sup>3</sup> In the former, the substance of the governing noun is so merged in the genitive, that it cannot be particularised by the definite article, except through the particularising of the genitive, and that the particularising of the genitive always affects it also; thus,

*bintu malik-in*, is a daughter of a king; *bintu 'l-malik-i*, is the daughter of the king. A daughter of the king cannot be expressed by the genitive except with the intervention of a preposition, *bint-u* to *li'l-malik-i*, a daughter (belonging) to the king.<sup>6</sup>

An extremely remarkable and perfectly independent coincidence

<sup>1</sup> Wright, Syntax, p. 55-63.

<sup>4</sup> Ibid. p. 151.

<sup>2</sup> Ibid. p. 133-135.

<sup>5</sup> Ibid. p. 41.

<sup>3</sup> Ibid. p. 134.

<sup>6</sup> Ibid. p. 153.



male sex, whether it come from a masculine or feminine singular, or if it be a feminine plural, the preceding verb may be masculine or feminine singular (74, Ex. 7, 18). But if the subject be *pluralis sensus* of the female sex, the preceding verb should be feminine.<sup>1</sup>

In general, when once the subject has been mentioned, any following verb must agree with it strictly in number and gender.<sup>1</sup>

If the subject be a substantive in the dual, the preceding verb must be singular, but must agree with the subject in gender.<sup>2</sup>

The verb frequently agrees in gender, not with the grammatical subject, but with a genitive annexed to it<sup>3</sup> (74, Ex. 22).

The nominative follows the verb, but emphasis or a strengthening adjunct may put it first; the object also follows verb.<sup>4</sup>

73. Every interrogative clause takes the direct form of question.<sup>5</sup>

The relative pronoun requires for its antecedent a defined noun. If the antecedent be indefinite it is represented in the relative clause by a personal pronoun whether separate or affixed (74, Ex. 8, 22), or it is not represented at all. If the antecedent be definite it is generally connected with a relative pronoun which commences the relative clause, and agrees with it not only in gender and number but also in case;<sup>6</sup> and when this case does not suit the relative clause the antecedent is represented in the latter in its proper relation by a personal pronoun or affix<sup>7</sup> (74, Ex. 23, 24).

It shows weak sense of relation that the copulative conjunctions *wa* and *fa* are often used for adversative relations and others of a different nature<sup>8</sup> (74, Ex. 2).

sat where sat father his

74. Examples: (1.) *Galasa* *ḡayṡu galasa ḡabū · hu*, he sat where  
 died art. nom. at gen. and  
 his father had sat<sup>9</sup> (see 65). (2.) *Māta 'r · Raṡūl · u bi · Tūs · a wa*  
 was went out to gen. to combating gen. gen. gen.  
*kāna ḡaragu ḡilya ḡurāsān · a li-muḡṡirabat · i Rāḡiḡ · i 'bu · i*  
 art. gen. and was this art. nom. already went out and cast off  
*'l-Laiṡ · i wa · kāna ḡāḡū 'r-Rāḡiḡ · u qad ḡaraya wa-ḡalaja*  
 art. allegiance accus. and gained victory over gen.  
*ḡat' · t' aḡat · a wa · tajallaba ḡalya Samarḡand'a*, ar-Rashed died  
 at Tūs after he had set out for Khorasan to combat Rāḡiḡ ibn el-Leit  
 who had rebelled and cast off his allegiance and taken forcible possession  
 of Samarkand;<sup>10</sup> the proper nouns are all diptotes except *Rāḡiḡ*  
*al-Laiṡ* (60); *kāna* followed by a perfect expresses a pluperfect (65);  
*wa* expresses several relations of facts (73); *muḡṡirabat* is *nomen*  
*actionis* of the third form (57) of *ḡaraba* spoliavit (see Golius, from  
 whom all the radical meanings are taken), it governs its object in the  
 genitive (67), dropping its final *u* before the genitive which it  
 governs (69). *Rāḡiḡ* in drops the final *u* before *bu* (60), which has  
 dropped it before the genitive which it governs (69); *tajallaba* is  
 fifth form of *ḡalab*, conquered, and means conquered effectually for  
 and if that people accus. art. towns believed 3d pl. and  
 himself. (3.) *Wa-lau ḡanna ḡahl · a 'l · qurai aman · ū wa*

<sup>1</sup> Wright, Syntax, pp. 207, 208.

<sup>2</sup> Ibid. p. 209.

<sup>3</sup> Ibid. p. 212.

<sup>4</sup> Ibid. pp. 30, 180, 185, 186, 311.

<sup>5</sup> Ibid. p. 220.

<sup>6</sup> Ibid. p. 228-231.

<sup>7</sup> Ibid. 231-234. <sup>8</sup> Ibid. p. 240.

<sup>9</sup> Ibid. p. 4.

<sup>10</sup> Ibid. p. 6.

feared 3d pl. certainly bestowed 1st pl. on them blessings accus. from  
 'ttaqa · ū la · fayayḫ · nū ḡ'alai · him barakāt · in minā  
 art. heaven gen. and art. earth gen.

's'samū · i wa · l · ḥarī · i, and if the people of those towns had believed and feared (God), we would have bestowed upon them blessings from heaven and earth; <sup>1</sup> *ḥahla* the subject is put in the accusative after *ḥanna* (68), and drops the final *n* before the genitive (69); *qurai* is given by Golius as the irregular plural, i.e., *pluralis fractus* of *qaryatun* or *qiryatun*; *ḥittaqā* is the third plural perfect of the eighth form of *waqay* cavit, *y* being dropped before *ū*, and *w* assimilated before *t*, its meaning is *cavit timuitque sibi*; the suffix *hum* becomes *him* after the *i* of *ḡ'alai*, *ḡ'alya* and *ḥilya* become *ḡ'alai*, *ḥilai* before the suffixes; the verbs are all in the perfect without distinction of mood or time; the preposition *min* takes *a* from the following article,<sup>2</sup> and governs the following nouns in the genitive.

respond 2d pl. imper. to God gen. and to the apostle gen. when has called  
 (4.) ḥistagīb · ū li · llāh · i wa · li · r · rasūl · i ḥiḡā daḡfā ·  
 you to what 3d sing. vivify you

*kum*, *li · mū yu · ḫḡī · kum*, respond to God and to the apostle when he calls you to that which can give you life; <sup>3</sup> *ḥistagību* is second plural imperative of the tenth form of *ḡība* secuit; the article *ḥal* suffers elision of its first letters and assimilation of its final; *rasūlun* passive adjective (57) from *rasala* nuncium misit; *n* being dropped on account of the article (60); *yuzḡīkum*, third singular imperfect of fourth form of *ḫayya* or *ḫayai* vixit; with objective if did 2d sing. this perished 2d sing.

suffix of second plural. (5.) Ḥin faḡ'al · ta ḡālika ḥalik · ta, if you do this you will perish, the verbs are both in the perfect. If the perfect after conditional particles is to express past time, the verb *ḥāna* or a verb of kindred meaning must be prefixed to the

were 3d pl. if 3d pl. attained 3d pl.  
 correlative clauses; as *ḥān · ū ḥin bālaḡ · u balaḡ · u*, if they exerted themselves to attain (an object), they attained (it); <sup>4</sup> *bālaḡa* is

the third form of *balaḡa*. (6.) Ḡāḡa ḥilaiḥi · ya · ḡūdūhu, he came to him to visit him; *ḡaḡūdu* third singular imperfect of *ḡādu*, visitavit; came 3d sing. laugh

*ḡāḡa Zaid'un ya · dḡḡaku*, Zaid came laughing; <sup>5</sup> *ḡaḡḡaku* third singular imperfect of *ḡaḡika* risit. (7.) Wa'ttabaḡ · ū mā · ta · follow art evil spirits on reign gen. gen.

*tlū 's · sayātūnu ḡ'alya mulk · i Sulaimān · a*, and they followed what the evil spirits taught in the reign of Solomon; <sup>6</sup> *ḥittabaḡū* is third plural perfect of the eighth form of *tabaḡa* secutus fuit; *tatlū* is third singular feminine imperfect of *talū* secutus fuit; *sayātūnun* is *pluralis fractus* of *saiṭūnun*, it drops the final *n*, having taken the article (60); *tatlū* agrees with *pluralis fractus* in singular feminine (72) and expresses what was present at the time of the preceding verb; and fut. I

*Sulaimana* is genitive of the diptote proper name (60). (8.) Wa'saḡa ·

<sup>1</sup> Wright, Syntax, p. 7.

<sup>4</sup> Ibid. p. 10.

<sup>2</sup> Wright, p. 20.

<sup>5</sup> Ibid. p. 13.

<sup>3</sup> Ibid. Syntax, p. 8.

<sup>6</sup> Ibid. p. 15.

hire persons accus. 3d pers. carry 3d pl. 3d sing. obj. to house my  
*stahyiru haqawm'an ya · ẖmil · ūna · hu hilya manzil · i*  
 and I be I last accus. 3d pl. suff. and not 3d pers. be remained  
*wa · ha kūnu hanū hāẖir · a · hum wa · lī ya · kūnu baqiya*  
 behind 1st sing. suff. thing 3d pers. occupy mind 1st sing. suff. with doing gen.  
*waraaḥ · i saihun yu · sjiḥu jikr · i bi · jiḥl · i*  
 3d sing. suff. and removing and I be already get help 1st sing. for soul  
*hi wa · nayl · i hi waḥaḥkūnu qadi ḥstaḥḥar · tu li · najs*  
 my unto relief gen. body my from art. labour gen. with small gen. pay gen.  
*· i fī hiraḥat · i balan · i ḡani 'l · kaḥl · i bi · yasir · i ḡugrat · in*  
 1st pers. give 3d fem. obj. to 3d pl. suff.

*ḡuḡḡi · ha la · hum*, and I shall hire some people to  
 carry it to my house, and I shall be the last of them, and there shall  
 not have remained behind me anything to give occupation to my  
 mind with the doing or removing of it, and I shall have got help for  
 myself (71), even to the relief of my body from the labour with a  
 small pay which I shall give to them; <sup>1</sup> *sa-* expresses real futurity  
 (64), *ḥastahyiru* is the first singular imperfect of the tenth form of  
*ḡagara* mercedem dedit, *haqawmun* is *pluralis fractus*, fourteenth form  
 (59) of *qawmun* populus; *yaẖmilūna* third plural imperfect of *ẖamala*  
 portavit; *manzil* derived from *nazala* habitatum venit; *ḡakūnu*, first  
 singular imperfect of *kana* extitit; *hāẖira* accusative after *ḡakūnu*  
 (66); *baqiya* is third singular perfect, and following *yakūnu* it  
 expresses a future past (65); the person in *yusjiḥu* serves for relative  
 pronoun (73); *yusjiḥu* is third singular imperfect fourth form of  
*ḡajala* occupavit; *qad* takes *i* before the following *hi*, which drops the  
*i*; *ḥistaḥḥartu* is first singular perfect of tenth form of *ḡ'ahara* juit;  
*hiraḥatun* is the *nomen actionis* feminine of the fourth form of *rāḡa*  
 quievit, it drops the *n* before the genitive which it governs (69); *ḡan*  
 takes *i* before the article, as words ending in a consonant do generally  
 before an initial *h*; <sup>2</sup> *ḡugratun*, derived from *ḡagara* mercedem dedit;  
*ḡuḡḡi* is first person singular imperfect of fourth form of *ḡatā* manu  
 accepit (Golius); *-ḡa* serves for relative pronoun (73); *li* becomes *la*  
 before the pronominal suffix. <sup>3</sup> (9.) *ḡa · lam ta · ḡlam ḡanna 'l-lāh*  
 accus. to him sovereignty art. heavens gen. and art. earth gen.

*a la · hu mulku 's-samāwāt · i wa · 'l · ḡarḍ · i*, didst thou not  
 know that God has the sovereignty of the heavens and of the earth? <sup>4</sup>  
*taḡlam* is second singular jussive of *ḡalima* seivit; the jussive after  
*lam* is past present, i.e., Indo-European imperfect (64); *allāha* is  
 accusative after *ḡanna* (68); there is no verb to have. (10.) *ḡam*  
 think 2d pl. that 2d pers. enter art. paradise accus. and not yet 3d sing. come  
*ẖasibtum ḡan ta · dḡulū 'l · ḡumāt · a wa · lammā ya · ḡti*  
 2d pl. obj. likeness nom. who pl. pass away 3d pl. from before you  
*hum maḡal · u 'lāḡina ḡala · ū min qabl · i-kum*, do ye think  
 that ye shall enter Paradise before there shall have come on you what  
 came on those who passed away before you; <sup>4</sup> *ẖasibtum* is second  
 plural perfect, though translated as present (65); *taḡulū* is second  
 plural subjunctive (55) of *daḡala* intravit; *yaḡti* is third singular jussive.

<sup>1</sup> Wright, Syntax, p. 15.<sup>2</sup> Wright, p. 21.<sup>3</sup> Ibid. p. 225.<sup>4</sup> Wright, Syntax, p. 16.

sive of *ḥatai* venit (55, 64); it seems from *maḥalu* not having the final *n* that it governs *ḥallaṭina* in the genitive; *ḫalaṭ* is third plural perfect of *ḫalaṭ* recessit; *qabli* is genitive of *qablun* pars anterior, approach art. departure nom. other accus. that governed by *min*. (11.) *Ḥaziba* 't·*taraxḫul*·*u* *ḡair*·*a* *ḥanna* camel accus. our not yet 3d sing. fem. move off with saddle our *rikāb*·*a*·*nā* *lammā* *ta*·*zul* *bi*·*riḫl*·*i-nū*, our departure is close at hand save that our camels have not yet moved off with our saddles; *taraxḫulum* is the *nomen actionis* of the fifth form of *raḫala* instruxit camelam sella, profectus fuit; the final *n* is dropped after the article (60); *ḡaira* adverbial accusative after *ḥaziba* (66); *rikābanā* accusative after *ḥanna* (68); *tazul* is third singular feminine jussive (64) of *zawala* dimovit e loco, the imperfect would be *tazūlu*, but the final syllable being closed in the jussive the short vowel is preferred; the singular is used for the plural in *rikābanā* and *riḫlānā*.  
not 3d sing. was 3d sing. enamoured art. poetry accus. and art. poets  
(12.) *Lam* *ya*·*kun* *yu*·*ḫibbu* 's·*ṣiḡr*·*a* *wa*·'s·*ṣuḡfaraḥ*· accus.

*a*, he was not fond of poetry and poets; *yakun* is third singular jussive of *kāna* extitit, *u* being short on account of closed syllable, used after *lam* (55, 64); *yūḫibbu* is third singular imperfect passive of fourth form of *ḫabba* amavit, contemporaneous with *yakun*; *ṣuḡfaraḥ·un* is *pluralis fractus*, twentieth form of *ṣaḡfirun* poeta, *n* being if 2d pers. conceal what in breasts  
dropped after the article (60). (13.) *Ḥin* *tu*·*ḫfū* *mā* *fī* *ʿulūr*· gen. 2d pl. or 2d disclose 3d sing. obj. 3d sing. know God nom.  
*i*·*kun* *ḥau* *tu*·*bdu*·*hu* *ya*·*ḡlam*·*hu* 't·*lāh*·*u*, whether you conceal what (is) in your breasts or disclose it, God will know it; *tu·ḫfū* is second plural jussive (55) of fourth form of *ḫafū* celavit, and *tubdū* is the same of *badava* apparuit; *ʿulūrun* is *pluralis fractus* sixth form of *ʿadrun* pectus; *yaḡlam* is third singular jussive (55)  
to 3d sing. spend possessor wealth gen.

of *ḡalima* scivit. (14.) *Lī*·*yu*·*ṇḡiq* *ḡu* *saḡat*·*in*, let the possessor of wealth spend; *yūṇḡiq* is third singular jussive of fourth form of *nafuqa* vendibilis fuit; *lī* prefixed makes it imperative (55).

only said this that not 3d sing. be despised in art. knowledge gen.  
(15.) *Ḥinnarmā* *qāla* *ḡalika* *lī·ḥal·lū* *yu*·*staḫaffa* *bi*·'l·*ḡilm*·*i*, he said this only that learning might not be despised; *yustaḫaffa* is third singular subjunctive (55) passive of the tenth form of *ḫaffa* those who fought 3d pl. among us surely 1st pl. guide  
levis fuit. (16.) *Hallaṭina* *ḡḥad*·*ū* *fī*·*nū* *la*·*na*·*ḥaliyanna*· 3d pl. obj. paths our

*ḥum* *subularnū*, those who have fought in our cause we will surely guide in our paths; *ḡḥadu* is third singular perfect of the third form of *ḡahala* laboravit; *naḥaliyanna* is first plural energetic imperfect of *ḥadai* recte duxit; *subula* is accusative of third form of *pluralis fractus* of *sabilun* via, the *n* being dropped before genitive suffix (69);

not 2d pers.  
it is an adverbial accusative according to our paths (66). (17.) *Lā* *ta*·*die* pl. if not and ye pl. masc. nom.  
*mūt·urna* *il·lū* *waḥantun* *muslim*·*ūna*, do not die without you

<sup>1</sup> Wright, Syntax, p. 16.

<sup>2</sup> Ibid. p. 17.

<sup>3</sup> Ibid. p. 24.

<sup>4</sup> Ibid. p. 20.

<sup>5</sup> Ibid. p. 27.



are Muslims; <sup>1</sup> *tamūtunna* is second plural of the first energetic of *māta* mortuus est; *muslimun* is *nomen agentis*, and *hislōmun* *nomen actionis* when is shaken 3d fem.

of fourth form of *salama* pacem fecit. (18.) *Ḥiṭā ruqqu · ti* art. earth nom. shaking accus. and is shattered 3d sing. fem. art. mountains shattering 'l · ḥard · u · ragḡ · an · wa · bussu · ti 'l · gibāl · u · bass · accus.

*an*, when the earth shall be shaken with a shaking, and the mountains shattered with a shattering; <sup>2</sup> *ruqqat* is third singular feminine perfect passive of *ragga* agitavit, it takes *i* according to the rule that words ending in a consonant take *i* before *ḡ*; <sup>3</sup> *bussati* is the same from *bassa* miscuit; they express the event as completed though thought in the future; the accusatives are adverbial (66), and give intensity (66); *gibālun* is *pluralis fractus* fifth form of *gabālun* mons, *n* dropped beat me

after article (60), verb is feminine singular (72). (19.) *Darabānī* art. beating accus. which not 3d pers. is unknown on thee

'd · darb · an · ya · 'l · laḡi lī ya · ḡ · faī ḡ · falai'ka, he beat me the beating which is not unknown to you; <sup>2</sup> *yaḡ · faī* is third singular imperfect came me divorce nom. art. day gen.

fect of *ḡ · fiya* latuit. (20.) *Balaḡanī taṭliqū 'y · yaum · i* Zaid · nom. accus.

*an Hind · an*, I have heard that Zaid has to-day divorced Hind; <sup>4</sup> *taṭliqun* is *nomen actionis* of second form of *ṭalaqa* repudiata fuit (uxor); *zaidun* is nominative case to a verbal noun (60), and this

governs an accusative (67). (21.) *Man ḡarāda ḡan ya · kūna 'bnwḡu* learned accus. 3d sing. is required that 3d sing. provide for art. poor accus. of ḡ · ālim · an · ya · nbaḡi ḡan yu · raḡ · fiya 'l · fuḡarāḡ · a · mīna 'l · wise gen.

*fuḡahāḡ · i*, whoever wishes his son to be learned must provide for the poor among the learned; <sup>5</sup> *ḡarāda* is third singular perfect fourth form of *rāda* petiit (pabulum); *ḡakūna* is third singular subjunctive of *kōma* extitit; *ḡ · ālimun* is *nomen agentis* of *ḡ · ālima* scivit, it is accusative after *ḡakūna* (66); *yanbaḡi* is third singular imperfect seventh form of *baḡi* quesivit; *yurāḡ · fiya* is third singular subjunctive of third form of *raḡai* pavit (gregem); *fuḡarāḡun* is *pluralis fractus* twentieth form from *faḡīrun* pauper, and *fuḡahāḡun* the same from *faḡīhun* sapiens; are 2d pl. good accus. people gen. was produced

*min* takes *a* before *ḡ*. (22.) *Kuntum ḡair · a ḡummat · in ḡuḡriḡa ·* 3d sing. fem. for art. mankind

*t li · n · nās · i*, ye are the best people that has been produced for mankind; *ḡaira* is accusative after *kuntum*, the second plural perfect of *kūna* (66); *ḡuḡriḡat*, third singular feminine perfect passive of fourth form of *ḡaragū* prodiit; it agrees in gender with the genitive, which is governed by the grammatical subject (72), and the personal suffix serves for relative pronoun. (23.) *ḡ · ul · tu 's · saīḡ · a* visit 1st sing. art. old man accus.

*'l · laḡi huwa mar · ū · tun*, I have visited the old man who is sick; *ḡ · ultu* who he sick art. thief nom. who

is first singular perfect of *ḡ · ūda* visitavit. (24.) *ḡas · sārīq · u 'l · laḡi*

<sup>1</sup> Wright, Syntax, p. 28.

<sup>2</sup> Ibid. p. 39.

<sup>3</sup> Wright, p. 20.

<sup>4</sup> Ibid. Syntax, p. 42.

<sup>5</sup> Ibid. p. 71.

killed him son my  
*qatala'hu 'bn 'i*, the thief whom my son killed ; in both these sentences *hallaḥi* agrees with the antecedent, and this is represented in the relative clause by the third personal pronoun (73).

## HEBREW.

75. There was a weakness of utterance in Hebrew compared with Arabic arising from reduced force of breath from the chest pressing on the organs in speaking. Thus *ḡ* was so imperfectly uttered that it was represented in Greek by ' or by, and will here be written small ;<sup>1</sup> and *w*, instead of being uttered strongly with breath from the throat, was uttered weakly with breath from the mouth, in ejecting which the mouth closed, and the breath became sensible, passing between the lips as *v*. The ante-palatal sibilant *s* was in some words uttered with less pressure of breath from the chest so as to sound like the dental *s*. For when the breath is pressed not from the chest, but rather by compression of the hinder part of the mouth, the utterance tends to be made in a more forward position. This mode of utterance, with pressure from the mouth rather than from the chest, favours the surd rather than the sonant, for the sonancy is in the larynx ; and so *p* was developed in Hebrew in addition to *b*, and the weak pressure of breath in the reduced force of utterance at the end of a word being insufficient for the guttural aspirates or spirants, was reinforced by putting before them the open jet of the vowel *a* on which the organ closed.<sup>2</sup>

It was probably also owing to weaker pressure of breath from the chest that Hebrew was less guttural than Arabic ; for though this does not hinder guttural utterance if the guttural be followed by *w*, which marks a jet of breath beginning after the utterance of the guttural (Def. 26), it does render difficult the utterance of a guttural with breath passing on direct to a vowel. This gave to Hebrew utterance a palatal tendency, so that it took *y* for first radical where Arabic has *w* (50, 121). And to the same cause is to be attributed the weakness of the post-palatal and guttural aspirates and spirants, and of *n*, as it appears in the irregularities of the verb, which has the former among its radicals, or the latter for its first radical. Such verbs are regular in Arabic and Ethiopic.

Owing to a softness of utterance also, *k*, *t*, *p*, *g*, *d*, and *b* were softened with an aspiration when they followed a vowel ;<sup>3</sup> *t* and *q* were too strong to be affected by this influence.

There was also an indolence of utterance in Hebrew compared with Arabic, in consequence of which the distinctions of utterance were less observed. The distinction between *χ* and *ḡ*, and that between *ḡ* and *ḡ*, were not sufficient to be marked by different letters. The ante-palatals were not clearly distinguished from the dentals. The

<sup>1</sup> Gesenius, Hebrew Grammar, sect. 6.

<sup>2</sup> Ibid. sect. 22. 2.

<sup>3</sup> Ibid. sect. 21.

ante-palatal *t* was represented by Hebrew *teth*, and its aspirate by Hebrew *tsade*, but the medials in this organ were not distinguished, so that *t* and *t'* disappeared. And in the other organs, the aspiration being less decided, was not discriminated from the relaxation due to a preceding vowel.<sup>1</sup>

The vowel utterance was reduced in Hebrew, so that short vowels which were pronounced in Arabic according to their proper sign were sometimes reduced in Hebrew to mere sheva,<sup>2</sup> whose sound was indefinite, and which, after a guttural spirant or aspirate, was opened, not to a short vowel, but only to a half vowel or composite sheva.

A reduction of vowel utterance in Hebrew compared with Arabic appears also in its want of diphthongs, the *ai* and *au* of Arabic being either contracted in Hebrew to *ē* and *ō*,<sup>3</sup> or resolved into vowel and consonant as *ay* and *ar*,<sup>3</sup> and in permitting a syllable to end in two consonants at the end of a word.<sup>4</sup>

76. Every syllable, as in Arabic, begins with a consonant (50), whether it be *h* or another, with the exception of the copulative *ve*, when it becomes *ū*. If the syllable be closed with a consonant it has a short vowel, unless it be accented; but if accented, a closed syllable may have a long or short vowel.<sup>5</sup> When a closed syllable with a short vowel becomes open by losing the final consonant, the vowel is lengthened.<sup>6</sup> A short vowel is also lengthened by the accent in the last word of a clause.<sup>6</sup>

The accent is generally on the last syllable, sometimes on the penultima, never on the antepenultima;<sup>7</sup> a difference from Arabic which perhaps is due to the greater habitual sense of relation in Arabic. For the thought of a relation tends to give unity to each correlative, the mind thinking each as a whole as it thinks the relation of one to the other. And the greater the unity with which a word is thought, the more will its accent tend towards the beginning of it (Def. 27).

The strength of meaning of a prefix sometimes draws back the accent to the penultima. And the accent of the last word in a clause tends to go back from the last syllable to the penultima,<sup>8</sup> for it belongs partly to the clause, and is attracted back by it.

When a word increases at the end, and the accent is shifted forwards, any of the vowels—long or short—may, according to the division of syllables, either pass into sheva or wholly fall away.<sup>9</sup>

A guttural spirant or aspirate at the end of a syllable takes a half vowel or composite sheva when it is followed by an accented syllable,<sup>10</sup> because the utterance of these consonants is eased by giving voice to part of the breathing; and the tendency to do this is brought out by the volition to utter the accented vowel which is about to follow.

When the vowel of a syllable is merely sheva simple or composite, there is almost concurrence between the consonants which sheva separates. This, however, is not suffered in two successive syllables;

<sup>1</sup> Gesenius, sect. 9. 3. 11.

<sup>2</sup> Ibid. sect. 26. 4.

<sup>3</sup> Ibid. sect. 7. 1. 5.

<sup>4</sup> Ibid. sect. 26. 7.

<sup>5</sup> Ibid. sect. 26.

<sup>6</sup> Ibid. sect. 27. 2.

<sup>7</sup> Ibid. sect. 29.

<sup>8</sup> Ibid. sect. 29. 3. 4.

<sup>9</sup> Ibid. sect. 27. 3.

<sup>10</sup> Ibid. sect. 22. 4.

but to prevent it the first sheva is strengthened into a short vowel, and sometimes also the second is dropped.<sup>1</sup>

77. The vocalisation of Hebrew as compared with that of Arabic can be understood only by taking into account a disyllabic tendency which may be observed in the former, instead of the trisyllabic tendency which prevails in the latter. This difference is probably due in part to the weaker sense of the subjective process of being or doing corresponding to a less degree of attention given to it where life was easier than in Arabia, and there was more of material objects of interest. Such weakening of the sense of process would tend to reduce the vocalisation which expresses it; so that two vowels might be sufficient instead of three. And a disyllabic tendency springing from this cause would be favoured by the weak sense of relation which has been already mentioned as characterising Hebrew. This would cause the loss of the case endings of nouns, reducing them from trisyllables to disyllables; and it would also favour the loss of the final vowel of the stem or radical part of the verb, making it too a disyllable, and giving to the language in general a disyllabic tendency. For the deficient sense of relation would weaken the thought of the subjunctive which expresses in Arabic the aim or result or condition of another fact, and the distinction between it and the imperfect would disappear. The original final *u* of the imperfect would lose, from its significance, its contrast with the final *a* of the subjunctive, and both these vowels would be weakened. The weakening of the final *u* of the imperfect would throw the stress of the distinction between the imperfect and the perfect on the other differences of their formation, and the final *a* of the perfect would be weakened along with the final *u* of the imperfect. And this, coupled with the curtailment of the process, would destroy these vowels. The loss of the final vowels, owing to these causes, would reduce those parts of the verb to which they belonged from trisyllables to disyllables, so as to bring the stem of the verb as well as the noun to the disyllabic form, and to give that form generally to the less composite words of the language.

Now the three vowels of the verb in Arabic express the process of the engagement of the subject with the being or doing (48); and, so far as the reduction of these vowels in Hebrew is due to a cause different from the weaker sense of the subjective process, there will be an additional significance of that process thrown on the remaining vowels, and each of these will naturally have a fuller meaning and a larger utterance. The second of them, however, is left in a closed syllable when the original third vowel has been dropped; and the additional vowel utterance would fall rather on the first syllable, which is open, making the open syllable generally long. This would affect not only verbs, but also nouns, for, in truth, the attributive nature of the noun (Def. 4) is in these languages thought like the process of the verb, only that it is fixed in a substance instead of animating a subject (48, 57). And the length of the open syllable being thus established in the

<sup>1</sup> Gesenius, sect. 28. 1.

radicals of verbs and nouns would spread through the language as a general habit of utterance,<sup>1</sup> and would tend to become more marked in the solemn reading in the synagogue, to which the vowel points correspond.<sup>2</sup>

Now, along with this tendency to have the open syllable long, there exists an apparently opposite tendency to have it excessively short, its vowel being only simple or composite sheva. But this is reconciled with the former when it is seen to result from the same dissyllabic tendency which coincides with the former. Gesenius says that modern grammarians do not regard these as true syllables, but always reckon them as part of that which immediately follows.<sup>2</sup> And if they be regarded in that light, they cease to be an exception to the length of open syllables, and they carry out the dissyllabic tendency which arose from the diminished sense of process and of relation.<sup>3</sup>

3d sing. 3d sing. fem. 2d sing. fem.

Thus the persons of the Arabic perfect *qatula*, *qatalat*, *qataltī*,  
3d pl. 2d pl. 2d pl. fem.

*qatalū*, *qatalum*, *qataltunna* become in Hebrew *qātal*, *qāt-lūh*, *qātalt*, *qātēlū*, *qātultem*, *qātaltēn*, the accent being on the last syllable. In the first person singular and plural and the second singular masculine, the person element is less absorbed into the verb in Hebrew than the other persons, so that the accent falls on the preceding syllable, as if the word were ending there; and the verb being then a more com-

2d. sing. 1st. sing. 1st pl.

2d sing.

posite word is trisyllabic, *qātāltū*, *qātāltī*, *qātālnū*, like Arabic *qataltu*,  
1st sing. 1st pl.

*qataltu*, *qatalnū*. So also the feminine plural in the imperfect is felt as an added element *tiqtōlēnū*, the other persons being dissyllabic; and the feminine plural of the imperative is the same. In Hiphil also in the imperfect *-ī* and *-ū* are felt as added elements; *taqtīlī*, *taqtītū*.

78. The personal pronouns and the personal affixes are given in the table in 51. They have no dual number either separately or as affixes.

The demonstrative pronoun is *zēh* masculine, *zōθ* feminine, this; *hēllēh* or *hēl*, these. Another form of it is *zū*, which stands mostly for the relative.<sup>4</sup>

The article is *ha* or *hū* for both genders and all numbers.<sup>5</sup> It doubles the initial consonant of the noun, as Arabic *ḥal* does by assimilation of its *l*.

The relative pronoun for both genders and all numbers is *ḥašer*, sometimes abridged to *se* or *sa*.<sup>6</sup>

The interrogative and indefinite pronouns are: *mī*, who? whoever; *mah*, what? whatever.<sup>7</sup>

79. The forms, according to their technical names, and the conjugation of the regular verb, giving third singular of perfect and imperfect, and second singular of imperative, are as follows:

<sup>1</sup> Gesenius, sect. 26. 3.

<sup>2</sup> Ibid. sect. 26, note.

<sup>3</sup> Ibid. sect. 26. 4.

<sup>4</sup> Ibid. sect. 34.

<sup>5</sup> Ibid. sect. 35.

<sup>6</sup> Ibid. sect. 36.

<sup>7</sup> Ibid. sect. 37.

	Perfect.	Infinitive.	Imperative.	Imperfect.	Part. act.	Part. pass.
Kal	{ <i>qātāl</i> <i>kābēd</i> }	<i>qetōl</i>	{ <i>qetōl</i> <i>kibbāl</i> }	{ <i>yiqtōl</i> <i>yikbāl</i> }	<i>qotēl</i>	<i>qātūl</i> ; simple verb.
Niphal	<i>niqtāl</i>	<i>hiqqātēl</i>	<i>hiqqātēl</i>	<i>yiqqātēl</i>	<i>niqtāl</i>	reflexive, reciprocal, passive.
Piel . .	<i>qittēl</i>	<i>qattēl</i>	<i>qattēl</i>	<i>yeqattēl</i>	<i>meqattēl</i>	intensive, iterative, causative, effective.
Pual . .	<i>quttal</i>	<i>quttal</i>	...	<i>yequttal</i>	<i>mequttal</i>	passive of Piel.
Hiphil .	<i>hiqtāl</i>	<i>haqtāl</i>	<i>haqtāl</i>	{ <i>yaqtāl</i> <i>yaqtēl</i> , juss. }	<i>maqtāl</i>	causative, transitive.
Hophal .	<i>hoqtāl</i>	<i>hoqtāl</i>	...	<i>yoqtāl</i>	<i>moqtāl</i>	passive of Hiphil.
Hithpael	<i>hiθqattēl</i>	<i>hiθqattēl</i>	<i>hiθqattēl</i>	<i>yiθqattēl</i>	<i>miθqattēl</i>	reflexive of Piel, to or for self, reciprocal.

The nature and uses of the perfect and imperfect are the same as in Arabic.<sup>1</sup>

The verbs which have *ē* or *ō* in the second radical have generally an intransitive meaning, and denote states or qualities (52). Sometimes both forms, the transitive and intransitive, exist together, as *mālāh*, to fill; *mālēh*, to be full.<sup>2</sup>

Although there are in Hebrew some unusual forms of the verb corresponding to the third, sixth, ninth, and eleventh Arabic forms,<sup>3</sup> the derived forms on the whole show less thought in Hebrew of the process reaching towards an end as in the third Arabic form, or maintained as in the ninth, and less tendency to reflexive formation expressing occupation about self. The only passive of the simple verb is the reflexive form Niphal.

There was not enough sense of action on an object to think self as an object with much distinction, or to support a passive of the simple form of the verb; it was only when the action was intense or causative that it was so thought as affecting the object that a passive was formed to give subjective expression to that affection.

The infinitives given above are those which are thought with less sense of the subjective process, which accounts for the abbreviation of the first vowel in Kal. The fuller infinitive of Kal is *qātōl*; those also of Niphal, Piel, and Pual have *ō* with the second radical, and those of Hiphil and Hophal have *ē*; Hithpael has only the one infinitive.<sup>4</sup> These fuller infinitives are more verbal in their meaning, the others more nominal;<sup>5</sup> and *o* expresses a deeper subjectivity than *e*, which is taken by the less subjective forms (see below).

The passives Pual and Hophal have no imperative (55).<sup>6</sup>

<sup>1</sup> Gesenius, sects. 123-125, 126 b.

<sup>2</sup> Ibid. sect. 43.

<sup>3</sup> Ibid. sect. 54.

<sup>4</sup> Gesenius, Paradigm, &c., sect. 52.

<sup>5</sup> Ibid. sect. 45.

<sup>6</sup> Ibid. sect. 46.

In the imperfect the personal prefixes all have the same vowel as that of the third singular, except the *h* of the first singular, which in Kal, Niphal, and Hithpael has *e*, and in Piel and Pual has *a* according to euphonic rule instead of *e* (75).

The *ō* of the second radical in the imperfect is long only on account of the accent.<sup>1</sup>

There is also a cohortative form of the imperfect which subjoins *-āh*, expressive probably of motion to (55), accented except in Hiphil; but it is used only in the first singular, and is not found in the passives; and a jussive form or rather abbreviated utterance of the imperfect second and third persons, which shows itself by dropping *h* when third radical; but the jussive has a distinct form in Hiphil,<sup>2</sup> in which the second *i* is relaxed to *e* by the reduction of utterance of the last syllable.

The imperative also takes *-āh*, and is shortened also, but not with such significance.<sup>2</sup>

The perfect expresses what is thought as completed, and the imperfect what is thought as not completed, whether in present, past, or future (see 98, the examples).

In continued narrations of the past, only the first verb is in the perfect, the others being in the imperfect; and in continued descriptions of the future, the first verb is in the imperfect, the others in the perfect (65).

This connection is usually expressed by the copulative *v*, which in this use of it has such strength of meaning when prefixed to the imperfect that it takes *a* instead of *e*, strengthens the first consonant, and sometimes draws back the accent also in the perfect<sup>3</sup> (76).

The second radical syllable is stronger in Hiphil than in the other forms, owing to the strong meaning of that form; it consequently has an attraction for the accent; and in the perfect its *i* becomes *a* when the consonant of the person concurs with the third radical.<sup>4</sup>

On comparing the Hebrew formations of the verb with the Arabic, Niphal with the seventh form, Piel and Pual with active and passive of third, Hiphil and Hophal with active and passive of fourth, and Hithpael with *hitqattala*, a form of the fifth, a close correspondence will be found when it is observed that Hebrew *e* corresponds to Arabic *i*, being probably a relaxed utterance of it (75), and similarly Hebrew *o* to Arabic *u*, and when it is remembered that the open syllable is long in Hebrew, and that the final syllable is apt to be lengthened in Hebrew by the accent which in Arabic falls on the antepenultima. Yet, after all this has been taken into account, there still remain differences which are probably due to the reduced sense of the subjunctive process in Hebrew (77). These are the reduced vocalisation of the personal prefix in the Hebrew imperfect, except in Hiphil and Hophal, in which it takes up the strong significance of causation, and the closer vowels in the perfect of Piel and Hiphil and in the last syllable of the perfect of Hithpael.<sup>4</sup>

<sup>1</sup> Gesenius, sect. 47.

<sup>3</sup> Ibid. sects. 48 b, 124, 125.

<sup>2</sup> Ibid. sect. 48.

<sup>4</sup> Gesenius, Paradigm.

In Piel and Hiphil the subjective process is thought more weakly than in Kal, because they are both thought more in the effect and less in the subject. And in consequence of this, the first vowel in both is reduced to *i* in the perfect; but in the other parts of both forms *a* remains in the corresponding syllable, the sense of subjective process being less in the perfect or completed fact than in the other parts. In Hithpaël, however, the sense of the subject strengthened by the reflexiveness maintains *a* with the first radical even in the perfect. The weakening of the sense of the subjective process is greater in Hiphil than in Piel, because the verb is thought more in the effect, and therefore less in the subject in the former than in the latter; and accordingly the second vowel, which in Kal is *a* when the verb is transitive and expresses the action passing from the subject (54), is more reduced in Hiphil than in Piel. In both, however, the subjectivity of the first and second persons affects the second syllable of the stem when thought in immediate connection with it, and therefore in those persons of the perfect that syllable has *a*.

In the passives of these forms the strong sense of the effect leads thought to the subject instead of from it; for in the passive the effect is in the subject. And the passive being thought in Hebrew as the realisation of an effect, rather than as that of a temporary state like the Arabic passive (54), the sense of subjective process in Pual and Hophal is that of the subject receiving into itself an effect which has come from an external source; and while the sense of internal reception suggests for the first vowel *u* or *o*, that of an affection from outside suggests *a* for the second vowel.

In the verbal infinitive of Pual which is more subjective than the nominal infinitive, and more recipient than the verbal infinitive of Hophal, which is partly active (being made to act), the second vowel becomes *o*, because the subject not being thought with the infinitive the subjectivity enters into the effect, and is thought more deeply in the experience of the subject. Hophal has a verbal infinitive with *ē* for its second vowel, which expresses an abiding in the subject less deep than *u* or *o*.

The *ō* of the active participle of Kal corresponds to *ā* of the *nomen agentis* in Arabic. The passive participle of Kal has similar vocalisation to the Arabic passive participle (57. 18); and the other participles are formed after the Arabic rule, except that of Niphal, which only lengthens the second vowel of the perfect.

The participles involve no position in time.<sup>1</sup>

There are, as in Arabic, irregularities caused by euphonic principles, when one of the radicals is a weak consonant; or by the contractions of indolent utterance (75), when first radical is *n*, or when second and third are the same.

80. In subjoining to the verb the personal suffixes of the object, the initial consonant of the suffix is attached immediately to the verb if the verb end in a vowel; but if the verb end in a consonant the suffix is joined by a connective vowel which for the perfect is *a*, and

<sup>1</sup> Gesenius, sect. 131.



for the imperfect and imperative is  $e^1$  (98, Ex. 17);  $a$  expresses that the action is gone to the object;  $e$ , which gives less sense of motion forth, expresses that the action is not yet completely gone to the object. But before the suffixes of the second person singular and plural the connective vowel is reduced to sheva or a half vowel, as if it was partly absorbed by the softening aspiration of  $k$ . When the object suffix is more strongly thought, it is strengthened by having prefixed to it a demonstrative element  $n$ . But the plural suffixes of second and third person are themselves so strong that they do not require this.<sup>2</sup>

These object suffixes are taken into such close combination with the verb that they cause abridgments of its vocalisation.<sup>3</sup>

81. There are two genders, masculine and feminine; and nouns are distinguished in this respect just as they are in Arabic. The feminine termination of nouns is  $-āh$  accented, or  $-eθ$  unaccented;<sup>4</sup> the strength of the vowel in the former, which is the most usual, having softened  $θ$  to  $h$ . The feminine ending is most used in adjectives and participles, as they strengthen the sense of the substance by their reference to it. The nouns generally involve a verbal idea<sup>5</sup> (48); and verbal nouns have forms and meanings corresponding to infinitives and participles; most frequently, however, deviating from the regular forms of these.<sup>6</sup>

But there are also nouns formed from other nouns, by prefixing  $m$ - to denote its place (57), by subjoining  $-ōn$ ,  $-ūn$  to denote diminutives, by subjoining  $-ī$  to denote what is connected with the object denoted by the root (57), by subjoining  $-ūθ$  and  $-īθ$  to express the abstract idea of the root, and by subjoining  $-ōn$ ,  $-ūn$  to denote that to which the root belongs as an attribute,<sup>7</sup> as *qalm-ōn*, eastern, from *qālēm*, east, *ḥaḥar-ōn*, hinder, from *ḥaḥar*, hinder part, *livyāθūn*, serpent, from *livyāh*, winding.

82. The Hebrew noun has not only a plural number but also a dual; the use of which, however, is confined chiefly to such objects as are by nature or art in pairs, so that it is suggested by the idea of the noun. The plural involves a weak sense of the manifold individuality, as appears from its use in expressing mere extension or greatness; but a stronger sense of that individuality than is in Arabic, as appears from the absence of the *pluralis fractus*. The plural element is  $-īm$  masculine,  $-eθ$  feminine, the former akin to  $m$ , the masculine plural ending of the second and third personal pronouns in Arabic and Hebrew, the latter to  $āt$ , the feminine plural element in Arabic. The dual ending for both genders is  $-āīm$ ,  $a$  being a dual element in Arabic too (51). In feminine nouns the final  $h$  becomes  $θ$  before the dual ending.

A considerable number of masculine nouns form their plural in  $-eθ$ , while many feminines have a plural in  $-īm$  (59). It is chiefly only in adjectives and participles that we find the plural endings regularly and constantly distinguished according to the gender.<sup>8</sup>

<sup>1</sup> Gesenius, sect. 57.<sup>2</sup> Ibid. sect. 58, Rem. 1.<sup>3</sup> Ibid. sects. 58-60.<sup>4</sup> Ibid. sects. 79, 105.<sup>5</sup> Ibid. sect. 81.<sup>6</sup> Ibid. sect. 82.<sup>7</sup> Ibid. sect. 85.<sup>8</sup> Ibid. sects. 86, 86 b, 106.

The masculine plural ending *-im* is external to the stem of the noun, as if the idea of the individual remained in the plural. The feminine *-ōθ* is an alteration of the final syllable of the stem, as if the idea of the individual was in some degree merged in the plurality (59). But a masculine noun may be so thought that different individuals denoted by it correspond imperfectly with each other, and that consequently a plurality so weakens the individuality by reduction to what is common to them all, as to suggest for the plural the feminine form. On the other hand, a feminine noun may in the plural lose the subordinate nature which it has as thought singly, and be so strengthened in its individuality as to suggest for its plural the masculine ending (59). Thus father is originally a very special thought, and is weakened by plurality, so that the plural of *āb* is *ābōθ*. On the contrary, word is less subordinate when thought in the plural, and *millāh* makes *millīm*.

The adjective and participle supplement the substantive idea, which is pluralised, and in doing so they strengthen the sense of the individual and of its gender, so that the plural ending proper to the gender is taken by them.

83. Hebrew has no case endings except some remains of the accusative *-a*, signifying towards or to a place, sometimes also, but very rarely, to a time. The genitive relation is indicated by a close connection between the two nouns (69); the genitive following its governor and remaining unchanged, while the governor is generally shortened by changes, partly in the consonants, but chiefly in the vowels, while the tone hastens on to the genitive. The governor, when thus changed, is said to be in the construct state; the endings *ām* of the dual and *īm* of the plural are changed to *ē*, the *ā* of the feminine singular is reduced to *a*, and the *h* returns to *θ*. The feminine plural ending is not changed.<sup>1</sup> The connection between the two nouns seems to have been in older times expressed by subjoining *ī* or *-ū* to the governing noun,<sup>2</sup> an application of the connective significance of these vowels quite different from their use in Arabic as case endings, *-i* of the genitive, *-u* of the nominative, and which seems to indicate the ancient absence of these case endings from Hebrew (see 131).

84. The singular noun, in taking the possessive suffixes singular and plural if it ends in a vowel, subjoins them immediately; but if it ends in a consonant it takes a vowel before them all except first singular, which vowel for the third person is usually *a*, forming *-ō* singular, *-ām* plural; for the second person and first plural it is usually *-e*; *a* indicates the third person as the more remote, *e* the other as the less remote.<sup>3</sup>

Dual nouns are suffixed like plural nouns.

The suffixes of plural nouns all take *i* before them (132), which, though feebly sounded, is present, and seems to be a connective element not needed with singular nouns by reason of their simplicity and the comparative facility with which in consequence they take up an element.

<sup>1</sup> Gesenius, sect. 87.

<sup>2</sup> Ibid. sect. 88.

<sup>3</sup> Ibid. sect. 89.

With the singular suffixes, the plural nouns take *a* before the *i*, but this *a* is weakened when the singular suffix is an additional syllable after the *i*. With the plural suffixes, the plural nouns change this *a* to *e*; both *a* and *e* expressing an extension of the stem by plurality, but *e* being a weaker expression of it, because it is less distinctly thought in the effort of connection with the heavier plural elements; thus *sūs'ī*, my horse; *sūs'a'ī*, my horses; *sūs'ō*, his horse; *sūs'a'v*, his horses; *sūs'ekem*, your horse; *sūs'ē'v'ekem*, your horses; *sūs'āθ'ī*, my mare; *sūs'ōθ'a'ī*, my mares; *sūs'āθ'ō*, his mare; *sūs'ōθ'a'v*, his mares; *sūs'āθ'ekem*, your mare; *sūs'ōθ'ē'v'ekem*, your mares;<sup>1</sup> see the Syriac suffixes to plural nouns (51).

It seems from this that the *ēi*, which is the termination of the construct state of the masculine plural and of the dual, consists of two parts, *ē* denoting the number, and *i* the connection, as in the old forms referred to above (83). This element *ēi*, though it served to connect feminine plurals with the plural suffixes, beginning as they do with a consonant, and requiring, therefore, a connective vowel, was not needed in forming the construct state of feminine plurals; for not only was the plurality which it expressed already expressed in the noun, but it was also connected with the genitive by the abbreviated utterance of the noun; whereas when the masculine plural in the construct state dropped the plural ending, there was no expression of its plurality, and this had to be expressed and connected. That the masculine plural ending should be dropped, was due probably to the same cause which in Arabic required that *na* of the masculine plural and *ni* of the dual should be dropped before a genitive (60). In consequence of this the masculine *pluralis sanus* in Arabic loses the expression of its plurality before a genitive, while the feminine retains it; but there is no connective element needed by the former, because the genitive has its case ending to express the connection.

The various vowel changes which nouns experience in Hebrew in the construct state, and in taking the personal suffixes and the elements of number, are due mainly to the euphonic laws which depend on the nature of the syllable and the position of the accent.<sup>2</sup> And the extent to which such laws determine the vowels in Hebrew makes a great and far-reaching difference between it and Arabic. For it shows that Hebrew had lost the fine sense of the significance of the vowels which still lived in Arabic, and which must have been present when this family of languages came into being.

85. The Hebrew numerals agree in form and use with the Arabic (63), the cardinals 3 to 10 having a feminine form with a masculine noun, and not with a feminine.<sup>3</sup>

Hebrew has still fewer pure elements of relation than Arabic, scarcely more than six proper prepositions; with which nouns are often used to denote relations, *e.g.*, which the Lord commanded, *beyad Mōšeh*, by the hand of Moses. There are hardly any conjunctions except the copulative. The proper adverbs also are very few.<sup>4</sup>

The interrogative prefix *ha-* seems to correspond to Arabic *ha-*<sup>4</sup> (64).

<sup>1</sup> Gesenius, sect. 89.

<sup>2</sup> Ibid. sect. 90. 3.

<sup>3</sup> Ibid. sect. 95.

<sup>4</sup> Ibid. sects. 97-102, 150.

86. In the derived nouns mentioned in 81, as in some similar formations in Arabic, there is an analysis of ideas into a root and an added element. But such formations are few in either language, the tendency being to express ideas as single wholes. In consequence of this tendency, what in other languages is expressed by an adjective or substantive which is formed from a substantive by means of a derivative element, is in these languages often expressed by a substantive

governed as genitive by another substantive (49), as <sup>master of dreams</sup> *baġal haḫalōmōθ*,  
<sup>man master of hair</sup>

dreamer; *ḫīs baġal sēġar*, hairy man.<sup>1</sup> Here we have a governing substantive instead of a derivative element, the mind being inapt to think such an element as part of an idea. The same inaptitude for thinking fine elements separately may be seen in the use of substantives to express self as a separate element, as *nefes*, soul, *qereb*, inner part, &c.<sup>2</sup> (see 92, 111, 116). None of these are appropriated to this meaning so as to be reduced to it by use, but all retain their other applications and consequently their native fullness of idea.

87. In Hebrew, as in Arabic (66), there is a want of adjectives, the quality being apt to be expressed as a substantive governed by that to

which it belongs, as <sup>garments of art. holiness</sup> *bigd·ēi hu · qodes*, the holy garments.<sup>3</sup> Not unfrequently also the genitive construction stands in the place of apposition (66), as <sup>virgin of daughter people my</sup> *beḫūlaθ bath ġamm·i*, virgin daughter of my people.<sup>4</sup>

The adverbial accusative (66) cannot be distinctly made out in Hebrew, probably because the sense of relation was so weak that this use of the noun was not distinguished in thought from its use as object or effect,<sup>5</sup> the connection of the verb with the noun not being distinctly thought. But an infinitive following the verb as an accusative is used to affect it adverbially (92), supplementing it<sup>6</sup> with a thought of what it realises, or a verb preceding another verb is used as auxiliary, supplementing the latter with an antecedent subjective process. The first verb may govern the second in the infinitive or be only connected with it (98, Ex. 11-13).

88. The governing noun is so far merged in the governed that sometimes its plural is expressed by the plural of the latter; and a possessive suffix referring to the whole idea is attached to the genitive,

<sup>mount holiness my</sup> as *har qods · i*, my holy mount.<sup>7</sup> And, as in Arabic (69), it is made definite by affecting with the article the governed noun, as <sup>man of</sup> *ḫīs*

<sup>war</sup> *miḫḫāmāh*, a man of war; <sup>men of art. war</sup> *ḫanṣei ham·miḫḫāmāh*, the men of war; <sup>word of art. prophet</sup>

*debar han · nābī*, the word of the prophet<sup>8</sup> (98, Ex. 18). In general, as always in Arabic, the article is inapplicable to a noun governing a genitive or affected with a possessive suffix; but sometimes it is so

<sup>1</sup> Gesenius, sect. 104. 2.

<sup>2</sup> Ibid. sect. 122. 1.

<sup>3</sup> Ibid. sect. 104. 1.

<sup>4</sup> Ibid. sect. 112. 3.

<sup>5</sup> Ibid. sects. 116, 135.

<sup>6</sup> Ibid. sect. 139.

<sup>7</sup> Ibid. sects. 106. 3, 119. 6.

<sup>8</sup> Ibid. sect. 109.

used to give demonstrative force, as  $\chi e' y$  <sup>3d sing. suff.</sup>  $\bar{o}$ , a half thereof;  $ha \cdot \chi e' y \bar{o}$ , the (other) half thereof; and when the genitive is a proper name, as  $ham \cdot mizba\chi$  <sup>art.</sup>  $b\bar{e}i\theta h\bar{e}'$  <sup>altar of Bethel</sup>, the altar of Bethel.<sup>1</sup> These exceptional applications of the article to a governing noun show that the noun is not so merged in the genitive as it is in Arabic (69). This appears

also in such constructions as  $ham \cdot mizba\chi$  <sup>art.</sup>  $han \cdot ne\chi \bar{o} s\bar{e}\theta$  <sup>art. altar of art. brass</sup>, the altar of bearing of art. ark art. covenant

brass;  $nos \cdot h\bar{e}i$   $ha\bar{h}\bar{a}ron$   $hab \cdot beri\theta$ , bearing the ark of the covenant;<sup>1</sup> in the former of these, if not in the latter, the second article must refer to the governing noun to connect it with the genitive. In rare instances a word is found to intervene between a genitive and its governor, which is not permitted in Arabic. Also the constructions  $\chi elqa\theta$  <sup>part of art. field</sup>  $has \cdot sudeh$ , a part of the field, and  $h\bar{u}s$  <sup>man of art. tilled ground</sup>  $h\bar{a} \cdot had\bar{a}m\bar{a}h$ , a husbandman, though exceptional, like the preceding, indicate that the governing noun is less merged in the genitive than in Arabic, the correlation not being thought as so close. The usual construction when the governor is indefinite and the other noun definite is, as in Arabic, to prefix to the latter the preposition  $le$ <sup>2</sup> (69).

89. When a substantive has the article, or governs a genitive which has it, or is affected with a possessive suffix, it needs to be represented by the article before an adjective or demonstrative which agrees with it in order that it may be connected with these (70), as  $ha\bar{j} \cdot gir$  <sup>art. city art.</sup>  $hag \cdot ged\bar{o}lah$  <sup>great</sup>, the great city (98, Ex. 4, 8).

When a substantive is particularised either by the article or by a genitive or suffix, the unparticularised idea is in these languages merged in the particularisation, the general substantive not being thought strongly enough to be maintained with the particularisation of it.

So when a substantive is distinguished by an adjective or a demonstrative, the undistinguished substantive is in these languages merged in the idea as limited by the distinction.

But the particularisation is of the general substantive idea, and it cannot therefore in these languages be applied to the limited substantive in which the general idea is merged.

And the distinction is of the general substantive idea, distinguishing from the whole extension of the noun, and it cannot therefore in these languages be applied to the particularised idea in which the general idea is merged.

The particularisation, therefore, must be made with the general substantive. The adjective or demonstrative must also be thought with the general idea, and having been thus thought is connected with the substantive already particularised by means of the article representing the latter.

The substance of nouns (Def. 4) being weakly thought in Hebrew, those nouns which are thought abstractly and therefore with weaker

<sup>1</sup> Gesenius, sect. 108. 2.

<sup>2</sup> Ibid. sects. 109. 1, 112. 3, 113. 2.

substance than other nouns, are apt to take the article to give them definite substance, as *hîn yihyu* <sup>though be sins your like art. scarlet like art.</sup> *šatāhēkem k·as·sānim k·as·snow they shall be white*  
*seleg ya ·lebîn ·ū*, <sup>though your sins be as scarlet they shall be white</sup> as snow.<sup>1</sup>

90. The adjective follows the noun which it qualifies.<sup>2</sup>

There is no adjectival expression of degrees of comparison.<sup>3</sup>

When a noun is qualified by another noun with a preposition prefixed (98, Ex. 19), or by a relative clause, it takes the construct state (83); also in other cases where close connection is to be expressed,<sup>4</sup> as *qiryath xāmāh David*, the city where David dwelt; *qiryath* is construct form of *qiryāh*, city.

91. The numerals 3 to 10 have the noun in the plural even when they precede it and govern it in the genitive;<sup>5</sup> in which case the Arabic uses always the *pluralis fractus* (63).

The multiples of ten, 20 to 90, take the noun after them in the singular, as in Arabic. But they may also follow the noun in apposition to it, the noun being plural, which construction is not in Arabic. The former is the more usual construction, and the plural may be used in it; the singular never occurs in the latter.<sup>6</sup>

Numerals, compounded of tens and units, take the object numbered either after them in the singular, or before them in the plural, as in the later books of the Bible (Dan. ix. 6), or the object is repeated, in the plural with the smaller number, in the singular with the larger.<sup>6</sup>

The greater use in Hebrew than in Arabic of the plural form of the noun in counting seems to indicate a stronger sense of the unit, and greater power of counting.

92. The pronoun of the third person frequently serves to connect the subject and predicate, and is then a sort of substitute for the copula (71). In this use it may, as in Arabic (70), represent a subject of the first or second person, as *hātāh hūh malk·ī*, <sup>thou king my</sup> thou art my king.<sup>7</sup>

The pure copula is rather too fine an element to be thought separately in these languages (71), hence *hayah* generally has a thought of existence or other more concrete realisation; and hence the copula takes up a sense of presence, and is then expressed by *yēs* existentia, and of negation, being then expressed by *hēin* defectus (see 116).

The weak sense of relation is seen in the use of pronominal connectives instead of proper elements of relation; as of *hēθ* before the accusative,<sup>8</sup> and also of object suffixes, though the object follows; and she saw him <sup>art. child</sup> *va ·t·irē·hu hēθ hayyeled*, and she saw the child;<sup>9</sup> also in the general inability of the relative pronoun to stand in a relation in the relative clause.

The pronoun *hāser* often serves merely as a sign of relation to give a relative signification to nouns, pronouns, or adverbs (73), as *hāser*

<sup>1</sup> Gesenius, sect. 107. 3.

<sup>2</sup> Ibid. sect. 110.

<sup>3</sup> Ibid. sect. 117.

<sup>4</sup> Ibid. sect. 114.

<sup>5</sup> Ibid. sect. 118. 2.

<sup>6</sup> Ibid. sect. 118. 3.

<sup>7</sup> Ibid. sect. 119. 2.

<sup>8</sup> Ibid. sect. 115.

<sup>9</sup> Ibid. sect. 119. 6.

to him

לִּזְ, to whom; but the accusative whom may be expressed by *hāser* alone<sup>1</sup> (see 98, Ex. 2, 21).

The weakness of the sense of relations, greater in Hebrew than in Arabic, shows itself in the absence of the subjunctive mood from the Hebrew verb (77), the imperfect being used instead<sup>2</sup> (98, Ex. 6). It appears also in the more verbal nature of the Hebrew infinitive; for that which reduces the subjectivity of the verb so as to make it infinitive, is that it is thought in a relation external to its subject which withdraws thought from its subjective realisation in the subject (Def. 13). And the more strongly such relation is thought, the more is the subjectivity of the verb reduced, and the idea of the verb assimilated to that of a noun. In Hebrew the sense of relation is weaker than in Arabic, and accordingly there is in Hebrew a more verbal infinitive as well as the less verbal, the former used as an accusative after transitive verbs which have the same subject as itself, and therefore in a relation not altogether external to its subject (Def. 13), the latter used when such relation is more strongly thought, or when the relation is external to the subject of the infinitive, that subject being in the second correlative and not in the first. But even this more nominal infinitive has more sense of subjective realisation than the verbal noun which is used in its place in Arabic.

The more verbal infinitive as accusative to a transitive verb of the same subject is used adverbially in Hebrew; and it is used, like the *nomen actionis* in Arabic, to express either intensity or continuance, preceding the verb in the former sense as strengthening the idea of it, and following it in the latter sense as adding to it in continuation<sup>3</sup> (see 98, Ex. 14, 15). For there is in Hebrew the same want of comparative thought as in Arabic (87), and the same inaptitude for adverbial expression.

The weak sense of relations in Hebrew appears also in the use of the more verbal infinitive after a verb with which it is very closely connected in thought; the connection being implied by referring it to the tense and person of the principal verb, rather than expressed by the relation which connects it<sup>4</sup> (see 98, Ex. 6, 16).

The weaker sense of relations in Hebrew is also partly the cause of its having fewer derived forms of the verb than Arabic. For there is a less distinct sense of the subject as object; so that Hebrew has only one reflexive form, and that form is the one in which the subject as object is thought least distinctly (52, 79), the reflexive signification passing into the passive. The full explanation, however, of this difference from Arabic must include the weaker sense in Hebrew of the engagement of the subject.

93. The want of close connection of the verb with the objects and conditions, arising from its being thought so much in the subject (53), causes a relation which governs a fact to be thought with the verb rather than with the sentence of which it is the verb. And

<sup>1</sup> Gesenius, sect. 121.

<sup>3</sup> Ibid. sect. 128.

<sup>2</sup> Ibid. sect. 125. 3.

<sup>4</sup> Ibid. sect. 128. 4.

hence it is that the verb is so apt to be reduced to the infinitive when it is object of a relation, its subject generally following immediately, sometimes as a genitive (98, Ex. 17), but generally in the nominative (98, Ex. 18), as *lū'sūm ham'melek hel lib · ʕ*, that the king should lay it to his heart.<sup>1</sup>

And because the verb is thought in the subject (53) rather than as affecting the object, it does not compound, with prepositions which would carry it to the object, but these are used after it with the noun.<sup>2</sup>

And there is often a gap between the verb and the objects and conditions, the verbal process not being carried the whole way to these, as in the *constructio pægnans*<sup>3</sup> (see 98, Ex. 20).

94. Hebrew shows an inaptitude for the passive conception of fact, not only in the substitution of the reflexive Niphal for the simple passive, but also in the strange constructions by which the passive is sometimes imperfectly expressed; as when an active in the third person governs what would be the subject of the passive (98, Ex. 21), or when the passive is impersonal in the third singular masculine, and the subject follows like an accusative with *heθ* before it.<sup>4</sup> In this construction *heθ* may be taken as preceding a nominative, which it sometimes does,<sup>5</sup> and connecting it as in apposition with the abstract subject of the verb. But to take it as accusative would accord with the Arabic idiom, in which verbs of being or becoming, instead of being followed by a nominative in apposition with their subject, are

followed by an accusative (66); as *vay · yuggal le'ribqah heθ* words of *dibrēi gēsāw*, and was made known to Rebecca the words of Esau; *yuggal* imperfect Hoph. of *nāgal*. Sometimes also the subject precedes the passive verb, and the verb, instead of agreeing with it in number and gender, is in the third singular masculine, as if impersonal.

95. The usual arrangement of words in calm discourse is the natural order, subject, verb, object, but any member of the sentence can at pleasure get prominence by being put first. [If the object or an adverbial expression goes first the verb follows next. The adjective as predicate generally precedes its subject. The arrangement, subject, object, verb, which is common in Aramæan, is seldom found in Hebrew, and only in poetry.<sup>6</sup>

The adjective follows its substantive, and the genitive its governor. The greatest prominence is given to any substantive in the sentence by putting it absolutely at the beginning of the sentence, and then representing it in its proper place by a pronoun.<sup>7</sup>

96. There is often in Hebrew, as in Arabic, imperfect agreement between the verb or predicate and the subject, in number and gender.

Collective nouns singular are usually constructed with the verb or predicate in the plural, the personality which is in the latter bringing out a sense of the individuals which are massed in an aggregate in the

<sup>1</sup> Gesenius, sect. 130.

<sup>2</sup> Ibid. sect. 137.

<sup>3</sup> Ibid. sect. 138.

<sup>4</sup> Ibid. sect. 134 note, 140.

<sup>5</sup> Gesenius, Hebrew Lexicon.

<sup>6</sup> Gesenius, Gram., sect. 142. 1.

<sup>7</sup> Gesenius, sect. 142. 2.



former; and those individuals may be masculine though the aggregate be thought as feminine<sup>1</sup> (58).

The subject may be plural to express extension or greatness, though denoting only a single substantive object; and the verb thinking only the personality without the greatness may be singular. Or the subject may be feminine as signifying an office though denoting the officer, for the office as a subordinate appendage is naturally thought as feminine;<sup>2</sup> and the verb thinking the personality will be masculine.<sup>3</sup>

The verb in the plural may be predicated individually of an aggregate which is singular; or it may be singular, being predicated in the aggregate of a plurality thought as such.<sup>4</sup>

When the verb or predicate is at the beginning of the sentence it often takes its simplest form, the masculine singular, the subject, which is feminine or plural, not having been yet mentioned. But if the construction is continued after the introduction of the subject, a verb subsequent to it must agree with it in gender and number.<sup>5</sup>

If a feminine substantive is subject to more than one verb or predicate, the feminine form is generally given only to the one nearest to the subject.<sup>6</sup>

When the subject is a substantive constructed with a genitive, the verb sometimes agrees with the genitive, the subject being merged in it.<sup>7</sup>

There is in Hebrew a strange variability in apprehending the gender of a substantive object when directing attention to it in a pronominal element. Not only is a feminine substantive sometimes represented by a masculine person or by a masculine pronoun, which might be supposed to arise from its gender being unnoticed in thinking the pronominal element, and the masculine form of this element being used as the simplest and most general, but also a masculine substantive, even one denoting a man, may be represented by a feminine pronoun; and the gender may be different in pronominal elements representing the same substantive object in the same compound sentence<sup>8</sup> (98, Ex. 22-26). In this case not only is the gender of the substantive dropped out of view, but the pronominal element takes the special feminine gender, which must be due to a weakness in the part which it has in the fact.

All these imperfect concords show a weakness of attention to the very object itself in forming the substantive idea of it (Def. 4), or in noticing it afterwards, so that the one mental act may vary from the other.

97. In consequence of want of cohesion and close construction in the Hebrew sentence, two negatives do not destroy but strengthen each other, as neither of them properly denies the whole.<sup>9</sup>

98. Examples: (1.) *Veḥatīh qax-le · kū mī · kōl-mahakāl ḥaser*  
 3d pers. is eaten and gather 2d sing. perf. to thee and has been to thee  
*yē · ākēl ve · ḥasap' · tu ḥēlei · kū ve · hāyāh le · kū*

<sup>1</sup> Gesenius, sect. 143. 1.<sup>2</sup> Ibid. sect. 105. 3.<sup>3</sup> Ibid. sect. 143. 2.<sup>4</sup> Ibid. sect. 143. 3. 4.<sup>5</sup> Ibid. sect. 144.<sup>6</sup> Ibid. sect. 144, Rem. 1.<sup>7</sup> Ibid. sect. 145.<sup>8</sup> Ibid. sects. 119, Rem. 1, 134.<sup>9</sup> Ibid. sect. 149. 2.

and to them for food

*ve · lū · hem le · hēkelūh*, and thou take to thee of all food which is eaten, and gather (it) to thee, and let it be to thee and to them for food (Gen. vi. 21); *qax* is an abbreviated form of *leqax* the imperative of *laqax* cepit; *kōl* is shortened to *kōl* when joined as above to a following word; *yēkālēl* is third singular imperfect Niphal of *hākal* edit; the imperative sense is carried on by the copulative *ve* to the two verbs in the perfect, the command going on in thought to the completion of what is commanded (79); *hēl* takes the suffixes as a

plural noun, as if it meant regions, directions. (2.) *Vay · y · hōmer*  
to me who walk 1st sing. at face his 3d sing. send  
*hēlā · y, yehōvāh hāser-hiθ-hallak · tī le · p'ānū · v y · islaχ*  
angel his with thee and succeed way thy and take 2d sing. perf.  
*malhūk · ō hittā · k ve · hi · t'liāχ darke · kū ve · lūqax · ta*  
woman for son my from kindred my and from house father my  
*hissāh li · bn · i mīm · mispaχt · i ū · mī · bēth hāb · i*; and he  
said to me, Jehovah, before whom I walk, will send His angel with  
thee, and prosper thy way; and thou shalt take a wife for my son  
of my kindred and of my father's house (Gen. xxiv. 40); *yhomer* is  
third singular imperfect of *hōmar*, if it were less closely connected  
with what follows it would be *yhōmar*; the copulative strengthens  
the initial because it connects it strongly with what has gone before,  
making it contemporaneous therewith (79); *hiθhallaktī*, first singular  
perfect, Hithpael of *halak*, I have ordered my walk; the relative  
*hāser* begins the relative clause, and the antecedent is represented  
in the proper relation in it by the possessive suffix of third singular  
(92); *hittāk* is the preposition *hēθ*, which is contracted from *hēneth*,  
and has the second singular suffix, which is *-āk* in pause, i.e., when  
accented at the end of a sentence or member of a sentence; the  
two following verbs are perfect, being thought as future completion

and  
(79); *hit'liāχ* is Hiphil of *t'alāχ*, has caused to succeed. (3.) *Vay ·*  
3d sing. say to all sons of evening and know  
*y · hōmer Mōseh ve · naharon el-kōl - benē Yisrāēl jereb v · idağ ·*  
2d pl. perf. that hath brought accus. you from land of Egypt  
*tem kī Yehōvāh hōt'ih hēθ · kem mē · heret Mit'raīm*;

and Moses and Aaron said unto all the children of Israel, At even then  
ye shall know that Jehovah hath brought you out from the land of  
Egypt (Exod. xvi. 6); *benē* is the plural of *bēn* in the construct  
state (84); *idağtem* is contracted from *vayadağtem*; thought goes  
to the evening, and their knowledge is thought as then complete;

and  
*hōt'ih* is the perfect third singular Hiphil of *yūt'ih* exiit. (4.) *Vay ·*  
3d sing. say because said 1st sing. absolutely there's no fear of  
*y · hōmer Abrahām kī hōmar · tī raq kein — yirēqāθ*  
God in art. place art. this and slay 3d pl. me on account of woman my  
*hēlohīm b'am-nūqōm hāzēh va · harāg · ū · nī gūl debar hīst · i*;  
and Abraham said, Because I thought surely the fear of God is not in  
this place, and they will slay me for my wife's sake (Gen. xx. 11);  
*kī* is a relative particle, which among other uses often means because,  
like Latin *quod*; *bammāqom hāzēh* (89); the effect *harāgūnī* is  
thought as complete in the perfect; *yirēqāθ* is the construct state of

and 3d sing. say Esau there is to me  
*yirhāh*, and *dabar* of *dābār*. (5.) *Vay · y · hōmer gēsāw yes · l · i*  
 much brother my 3d sing. be to thee what to thee Jacob nay  
*rāb hāx · i ye · hī le · kā hašer lāk vay · y · ōmer Yaḡaqōb hāl-*  
 emph. if emph. find 1st sing. perf. favour in eyes thy and take  
*nāh hīm -nāh māṭ · āh · tī xēn be · ḡēnei · ka ve · lāyax ·*  
 2d sing. perf. present my from hand my for on account see 1st sing perf.  
*ta minxāθ · i miy · yāl · i kī ḡal -kēn rāhī · θī*

face thy as seeing of face of God and 2d sing. be pleased me  
*pānei · ka kī · rēθ peṇī hēlōhim va · tī · rē · nī*; and Esau said,  
 I have enough, my brother; keep that thou hast unto thyself. And  
 Jacob said, Nay, I pray thee, if now I have found grace in thy sight,  
 then receive my present at my hand, for therefore I have seen thy  
 face, as though I had seen the face of God, and thou wast pleased  
 with me (Gen. xxxiii. 9, 10); *yehī* is the third singular imperfect of  
*hāyāh* fuit; *lāk* instead of *lki* in pause, *i.e.*, accented at the end of a  
 sentence; *ḡal-kēn* is used for therefore, *kēn* means straight, *ḡal-kēn* on  
 the level; the Hebrew for face is plural *pānim*, its construct state  
*peṇī*; *rēθ* is the verbal noun *rēh* in the construct state; *tirēh* is  
 second singular imperfect of *rāt · āh* delectatus fuit; *velāyaxta* is con-  
 nected as consequence with what precedes, and as such is thought in  
 its completion in the perfect; *ratirēnī* is connected as contempo-

give cohort. 1st pl. descend cohort. and confound  
 raneous with *rāhīθī*. (6.) *Hāb · āh n · hērad · āh ve · nābel ·*  
 cohort. there lip their that not 3d pers. understand pl. man lip of friends his  
*āh ḡām s · p · āθ · ām hašer lōh yi · ḡmei · ā hīs s · p · āθ rēḡ · ē · hu,*  
 go to, let us go down, and there confound their language, that they  
 may not understand one another's speech (Gen. xi. 7); *hāb* is the  
 imperative of *yāhab* dedit, and takes cohortative *-āh* (79); *nērad* is  
 first plural imperfect of *yarad* descendit, *nābol* is infinitive of *nabal*,  
 and both verbs change their second vowel to *e* before *-ah*; the infinitive  
 receives the tense and person of the verb with which it is connected  
 (92); *yisḡeḡū* is third plural imperfect of *sāmaḡ* audivit, the  
 imperfect being used where Arabic would have the subjunctive (92).

for what not from womb 1st sing. die from cunnus come out 1st sing. perf.  
 (7.) *Lām · māh lōh mē · reḡem hā · māθ mib · beten yāṭ · āh · θī*  
 and 1st sing. expire

*ve · he · ḡvāḡ*, why died I not from the womb? (why) did I (not)  
 give up the ghost when I came out of the belly? (Job iii. 11); why was  
 I not dying from the womb, expiring as soon as (*ve*) I had come out  
 of the vulva; *hāmūθ* and *heḡvāḡ* are both first singular imperfect; the  
 first letter of *māh* is doubled by the strength with which the preposition

and 3d sing. say 1st sing. go aside cohort. emph.  
 is thought. (8.) *Vay · y · hōmer Mōseh hā · sur · āh · n · nāh*  
 and 1st sing. see accus. art. sight art. great art. this wherefore not 3d sing.  
*vē · he · rēh heθ · ham · marḡeh haḡ · yādōl haz · zeh ma · dūāḡ lōh · yi ·*  
 be burnt art. bush

*bḡar ha · s · neh*; and Moses said, I will now turn aside and see this  
 great sight why the bush is not burnt (Exod. iii. 3); *hāsūr* is first  
 singular imperfect of *sur*, and *heḡeh* of *raḡah*; the adjective *ḡādōl*  
 and the demonstrative take the article because the noun has it  
 (89); *ma · dūāḡ* is contracted from *ma*, what, and *yādūāḡ* the *nomen*  
*patientis* of *yādāḡ* vidit, quid edoctus; *yibḡar* third singular imper-

fect of *bāḡar*. (9.) and 3d sing. call for and for Aaron  
*Vay · yi · qrah P'arḡōh le· Mōseh ū·le·Ḥaharōn*  
 and 3d sing. say entreat pl. to and 3d sing. Hiph. go away art.  
*vay · y · ḥōmer haḡtīr-ū hel Yehōrah ve · y · ā · sēr ha·*  
 frog pl. from part me and from people my and 1st sing. let go emph. accus.  
*l'pardeḡ · im mim'men-ni ū · mē · ḡam · mi va · ha · sal·l·x · āh heθ-*  
 art. people and 3d pers. sacrifice pl. to  
*hū · ḡam ve · yi · zbeḡ · ū la · Yehōrah*; and Pharaoh called for  
 Moses and Aaron and said, Entreat Jehovah that He may take away  
 the frogs from me and from my people, and I will let the people go  
 that they may do sacrifice unto Jehovah (Exod. viii. 8); *yīqrāh* is  
 third singular imperfect of *qārāh* vocavit; the copulative becomes  
*ū* before a consonant with sheva and before labials; *haḡtīru* is impe-  
 rative plural of Hiphil of *ḡāḥar* suffivit; *yāsēr* is third singular of  
 the short or jussive imperfect Hiphil (79) of *sūr* recessit; *ḡasallēx*

is first singular imperfect Piel of *sālaḡ* misit. (10.) *Ve·hā·ḡādūm*  
 knew accus. Eve wife his and 3d fem. conceived 3d fem. bring forth accus.  
*yādaḡ heθ-havvūh ḡist-ō va · ta · har va · tē · led heθ-*  
 Cain and 3d fem. say get 1st sing. perf. man  
*ḡain va · t · ḥomer ḡanī · θi ḡis heθ-Yehōrah*; and Adam knew  
 Eve his wife; and she conceived and bare Cain and said, I have gotten  
 a man from the Lord (Gen. iv. 1); the three verbs with *va* are imper-  
 fects, and *va* has the strong vowel *a* because it connects them strongly  
 with *yadaḡ*, making them imperfect in reference to it (79); *heθ-*

and 3d sing. say  
*Yehōrah* is not direct object but a condition. (11.) *Vay · y · ḥōmer*  
 Isaac to son his what this hasten 2d sing. to find son my and 3d sing. say  
*yīl'ḡak hel-ben-ō mah-zeh mihar · tū li · mī'ōh ben · i vay · y · ḥomer*  
 because Hiph. meet God thy to face pl. my

*kī kī · qrah Yehōrah heṭheika le·pān-ā · y*; and Isaac said unto his  
 son, How is it that thou hast found it so quickly, my son? And he said,  
 Because Jehovah thy God brought it before me (Gen. xxvii. 20);  
*mihartā lim'ōh*, thou hast hastened to find, i.e., hast found quickly  
 (87); *mē'ōh* is the more nominal infinitive of *māf'āh* invenit; *pānim*,  
 face; *mihartā* second singular perfect Piel of *māhar* festinavit. (12.)  
 and 3d sing. add and 3d sing. take woman and name her

*Va · y · yōsep' Habrāhām vay · yi · qqax ḡissāh ū · 'sem · āh qetūrāh*,  
 then again Abraham took a wife, and her name (was) Keturah (Gen.  
 xxv. 1); *yōsep' vayyiqqax*, third singular imperfect of *ḡasap'* and  
*nūqax*, adds and takes, for takes again (87). (13.) *ḡal- t · arb · ū*  
 2d pers. speak pl. high fem. 3d sing. proceed arrogant from mouth your for

*te · dabberū geḇōhah geḇōhah yē · l'ēḡ ḡāḥaq mip · pi · kem kī*  
 God knowledge pl. and by him Niph. weigh pl. actions  
*ḡel dēḡ · ōth Yehōrah ve · l · ō ni · θken · ū ḡalit-ōth*; talk no  
 more exceeding proudly, let (not) arrogancy come out of your mouth;  
 for Jehovah is a God of knowledge, and by Him actions are weighed  
 (1 Sam. ii. 3); *tarbū* is second plural imperfect Hiphil of *rābāh*  
 multiplicatus est; *tedabberū* is second plural imperfect Piel of  
*dūbar* locutus est; both used imperatively, and the former taking  
 the place of an adverb (87); *geḇohah* is feminine because it is thought  
 as a subordinate appendage of the verb; the negative is carried on

unexpressed to the second clause; *yēl'ēh* is third singular imperfect of

*yēl'ēh* exiit. (14.) *Hinnēh* <sup>lo eyes of Lord on art kingdom</sup> *gēm'ēi* *hadōnāy* *yehōvāh* *b' am'mamlākāh*  
art sinful fem. and destroy 1st sing. accus. 3d sing. fem. from surface of face of art.  
*ha'xattāh'āh* *re'hismād* · *tī* *hōth* · *āh* *mē* · *gāl* *pn'ēi* *hū* ·  
earth save that not destroy 1st sing. destroy accus. house of Jacob utterance of  
*hadōnāh* *hep'es* *kī lōh* *hasmūd* *hā* · *smūd* *heθ* · *bēiθ* *ya'jaqōb* *nehum*  
*yehōvāh*; behold, the eyes of the Lord God are upon the sinful  
kingdom, and I will destroy it from off the face of the earth, save  
that I will not utterly destroy the house of Jacob, saith Jehovah  
(Amos ix. 8); *hadōnāy* is supposed to be the plural of excellence (82),  
with possessive suffix of first singular; the adjective *xattāh'āh* has the  
article, because the noun with which it agrees has the article (89);  
*hismād'tī* is first singular perfect Hiphil of *sāmād*, which is not used  
in Kal; *hep'es* means stop or limitation, *hasmūd* is infinitive and  
*hasmūd* first singular imperfect of Hiphil of *samād*; the former  
intensifies the latter (92); *gēm'ēi*, *pn'ēi*, *bēiθ* are the construct forms  
of *gēmāim*, *pāmim*, *bayiθ*; *nehum* is the construct form of *nāhum*, the

*nomen patientis* of *nāhum* mussitavit. (15.) *Vay* · *y* · *hōmer* *lēk* *ve* ·  
say 2d sing. perf. to art. people art. this hear pl. hear infin. and not 2d pl.  
*hōmar* · *tā* *l'ā* · *gām* *hazzeḥ* *šimjū* · *ū* *sāmōaj* *ve* · *hāl* · *tū* ·  
understand pl. and see pl. see infin. and not 2d pers. perceive pl.

*bīn* · *ū* *ū* · *rhū* *rahō* *ve* · *hāl* · *tē* · *dāj* · *u*; and he said,  
Go and say to this people, Hear continually and understand not, and  
see continually and perceive not (Isa. vi. 9); *lēk* is imperative of  
*yalak*, *šimjū* and *rhū* imperative plural of *samaj* and *rahāh*; the  
command is carried from the first to *hāmurtā*, and in it is applied to  
completion, the two latter get continuation in their verbal infinitives  
(92); *tābīnū* and *tēdājū* are second plural imperfect of *bīn* and

and 3d pers. juss. Hiph. ride accus. 3d sing. in chariot art.  
*yādağ*. (16.) *Vay* · *y* · *arkēb* *hōth* · *ō* *b'mirkebeth* *ham* ·  
second which to 3d sing. and 3d. pers. cry pl. at face his and give  
*mišneh* *hašer* · *l* · *ō* *vay* · *yī* · *qrēhū* *le'p'ān'ūv* *hābrēk* *ve* · *nāθōn*  
accus. 3d sing. over all land Egypt  
*hōth* · *ō* *gāl* *k'ōl-keret'* *mīl'rām*; and he made him to ride in the  
second chariot which he had, and they cried before him *hābrēk*, and  
he put him over all the land of Egypt (Gen. xli. 43); *nāθōn* is the  
verbal infinitive of *nāthan*, being so closely connected with what  
precedes that the tense and person are carried on to it, and it is

and 2d pers. Niph. murmur pl. in tents your and  
infinitive (92). (17.) *Va* · *t* · *ē* · *rāqū* · *ū* *be* · *hāhalēi* · *kem* *ra* ·  
2d pers. say pl. in hating of accus. 1st pl. Hiph. go forth us from land  
*t* · *hōmer* · *ū* *b'sinḥaθ* *yehōvāh* *hōth* · *ā* · *nū* *h'ō* · *t'ā* · *nū* *mē'heret'*

Egypt to give accus. 1st pl. in hand of art. Amorite to Hiph. infin. destroy  
*mīl'rām* *lū* · *h'ōth* *hōth* · *ā* · *nū* *be* · *yad* *hā* · *h'mōrē* *le* · *hā* · *smūd* · *ē*  
us

*nū*; and ye murmured in your tents and said, Because Jehovah hated  
us, He hath brought us forth out of the land of Egypt to deliver us into  
the hand of the Amorites, to destroy us (Deut. i. 27); *tērāqū* is the  
second plural imperative Niphil of *rāqan* murmuravit; *sinḥaθ* is a  
nominal infinitive of *sānēh* odit, its construct form is *sinḥaθ* (93);  
*hōf'ēh* is third singular perfect Hiphil of *qāt'ēh* prodiit; *tēθ* is the

nominal infinitive of *nāthan* dedit; *l* takes *ā* before a monosyllable; *yad* is the construct form of *yād*. On the connective vowels of the and 3d pers. be rel. hear art. king accus. object suffixes see 80. (18.) *Va · ye · hi ki'smōāj ham'melek heθ* word of man art. God who cried against art. altar in Bethel and 3d pers. *-debar hīs -hā'helekhīm ha'ser qirūh gāl-ham'mizbēaḥ be'bēth'el vay · yē ·* put forth Jeroboam accus. hand his from top art. altar to say hold pl. *slāḥ yārāb'eām heθ -yād · ō mē'gāl ham'mizbēaḥ lē'mōr tīp's · u ·* him and 3d sing. fem. dry hand his which he put forth against 3d sing. and not *hū va · t · rēbash yād · ō ha'ser sālāḥ gāl'āi · v re · lōh* 3d pers. effect to Hiph. return it to him

*yā · kōl lu · ha'sīb · āh he'l'āiv*; and it came to pass, when the king heard the saying of the man of God who had cried against the altar in Bethel, that Jeroboam put forth his hand from off the altar, saying, Lay hold on him; and his hand, which he put forth against him, dried up so that he could not pull it in again to him (1 Kings xiii. 4); *yehi* is third singular imperfect of *hayāh* fuit; *ki* is the particle of correspondence in quality or in time, *ke*, which becomes *ki* before sheva; *smōāj*, the infinitive of *sāmāḥ* audivit, to which *ham'melek* is nominative (92); *debar* is construct state of *dābār*; *hīs* is defined by the article with *helekhīm* (88); *yislaḥ* is third singular imperfect of *sālāḥ* misit; *hemōr* is infinitive of *hāmar* dixit; *tīp'sū* is second plural imperative of *tap'as* prehendit; *tibas* is third singular feminine of *yābās* exaruit, agreeing with *yād*, which is feminine; *gāl* and *he'l* take the suffix like plural nouns; *yākōl* is third singular imperfect of *kālal* perficit; *ha'sīb* is the nominal infinitive Hiphil of *sīb* redire, to cause to return, it is shortened in taking the suffix.

multiply 2d sing. art. nation to him made great 2d sing. art. joy (19.) *Hirbi · θā hag · gōy l · ōh hi · g'āl · tā has · simḥāh* rejoice 3d pl. perf. at face thy as joy of in art. harvest as which 3d pers. exult *sāmēḥ · ū le'pānei · kā ke'simḥaθ b · aḥ · qat'ir ku'ha'ser yā · g'il ·* pl. in divide their spoil

*ū be'xallēq · ām sālāl*; thou hast multiplied the nation to him, thou hast made great the joy, they have rejoiced before thee according to the joy in harvest, as how they exult in their dividing spoil (Isa. ix. 2); *hirbiθā* and *hiq'daltā* are second singular perfect Hiphil of *rābāh* multus fuit, and *g'ādal* magnus fuit; *simḥaθ* is the construct form of *simḥāh*, connected with *baqqat'ir* as if with a genitive (90); *yāgilū* is third plural imperfect of *g'il* exultavit; *xallēq* is infinitive Piel of *ḥalaq* divisit; a subordinate fact is apt to be governed in the

infinitive. (20.) *Ho'siāj · ē · nē mi · pē ha'yeḥ ū · miq · qar'nē* <sup>save</sup> <sup>me from mouth of lion and from horns of</sup> buffaloes hear 2d sing. me

*rēmim g'onū · θā · nē*; save me from the lion's mouth and from horns of buffaloes hear (and deliver) me (Ps. xxii. 22); *ho'siāj* is imperative Hiphil of *yāsaḥ*, which is not used; *qar'nē* is the construct form of *qerānīm*, plural of *qeren* horn; *g'onū* is translated by Gesenius as imperative, the prayer being thought in perfect as accomplished; the last clause

<sup>nedom dwellers of</sup> is an example of the *constructio prægnaus* (93). (21.) *Ḥap' sōkenēi* houses of clay who in dust foundation their 3d pl. crush pl. them at face of *bottēi -xōmer ha'ser be'gūpār qesōl · ām ye · dakkeḥ'ū · m li'p'ne'i*

moth

-*gîṯs* ; much less them that dwell in houses of clay, whose foundation is in the dust and whom they crush before the moth (Job iv. 19) ; *ṣōkaiṯi* is construct form of *ṣōkaiṯim*, plural of participle of *ṣākan* habitavit ; *bottēi* construct of *bottim*, plural of *bayiṯ* ; the active third plural is used for passive, are crushed (94) ; at face of = before.

and 3d pl. say Naomi to two daughters in law her go pl. fem.  
(22.) *Va · t · ḥōmer nāgomi lē · stēi kalloṯ · ei · hā lēk · e · nāh* ;  
return pl. fem. woman to house of mother her 3d pers. do with  
*ṣōb · e · nāh ḥissāh lē · bēiṯ ḥim · n · āh ya · ḡaseh yḥōwāh ḡimmi ·*  
2d pl. masc. kindness as how do 2d pl. masc. with art. dead pl.  
*ā · kem ḫesed ka · ḥaser ḡasī · ṯem ḡim ham · mēṯ · im v · e ·*  
with 1st sing.

*ḡimmād · i* ; and Naomi said to her two daughters-in-law, Go, return each to her mother's house ; Jehovah deal kindly with you, as ye have dealt with the dead and with me (Ruth i. 8) ; *stēi* is the construct form of *setaṯim*, which is feminine of *ṣenaṯim*, two ; *lēk* is imperative of *yālak* ivit, and *ṣōb* is imperative of *ṣāb* redire ; *yaḡaseh* is third singular imperfect of *ḡāsāh* fecit ; *ḡasīṯem* is second plural perfect of the same, and is masculine though addressed to women, as also is the suffix in *ḡimmūkem* (96) ; *mēṯ* participle agentis of *nūṯ* mori. (23.) and 3d pers. be because fear pl. art. part. Pi. bring forth pl. accus. art. God and  
*Va · ye · hī ki · yārḥ · ū · ha · me · yallēl · ṯṯ ḥēṯ · hā · ḥelohim ray ·*  
3d pers. make for 3d pl. masc. houses

*ya · ḡas lā · hem bottim* ; and it came to pass because the midwives feared God that he made for them houses (Exod. i. 21) ; *yaḡas* is third singular jussive of *ḡāsāh* fecit, the suffix in *lāhem* is masculine (96).

and 3d pers. come pl. art. shepherds and 3d pers. drive away 3d pl. masc. obj.  
(24.) *Vay · yā · bōḫū hā · rōḡ · im ra · ye · ḡāreṣ · um*  
and 3d pers. stand and 3d pers. save 3d pl. fem. obj. and 3d pers. water accus.  
*vay · yā · qom Moṣeh vay · y · ṯṣiḡ · ān ray · y · aṣqe ḥēṯ*  
flock 3d pl. masc.

*l · ṯōn · ān* ; and the shepherds came and drove them away, and Moses stood up and helped them and watered their flock (Exod. ii. 17) ; the verbs are all imperfect, *yābōḫū* third plural from *bōḫ* venire, *yḡāreṣū* third plural Piel from *ḡāras* pepulit, *yāqom* third singular jussive of *qām* surgere, *yṯṣiḡ* third singular Hiphil of *yāsaḡ* not used, *yaṣqe* third singular jussive Hiphil from *ṣāqāh* bibit ; the suffixes *-ūm* and *-ān* refer to the daughters of Reuel mentioned in the preceding verse, and spoken of throughout it in the feminine gender ; *-ān* thinks them as feminine because helped by Moses as weak (96). (25.)

go near thou and hear accus. all that 3d pers. say God our and  
*Q · rab ḥatāh ū · ṣamaḡ ḥēṯ kōl · ḥaser y · ḥōmar y · horah ḥēṯ ḥē · nū v ·*  
thou fem. 2d speak to 1st pl. accus. all that

*ḥat tē · dabbēr ḥēṯ · e · nū ḥēṯ kōl · ḥaser y · dabbēr y · horah ḥēṯ ḥē · nū*  
to 2d sing. and hear 1st pl. perf. and do 1st pl. perf.

*ḥēṯ · e · kū v · ṣamaḡ · nū v · ḡasī · nū* ; go thou near and hear all that Jehovah our God shall say, and speak thou unto us all that Jehovah our God shall speak unto thee, and we will hear it and do it (Deut. v. 24) ; *tē · dabbēr* is second singular imperfect Piel of *dābar* locutus est, *ḥat* feminine, though addressed to Moses perhaps as in contrast to Jehovah (96) ; the perfects are future completions. (26.) and 3d pl. fem. demon. came pl. into middle of art. house takers of wheat and  
*Ve · hēn · nāh bāḫ · ū ḡad · tōk hab · bayiṯ lōqe · ḥēi ḫittim vay ·*

3d pers. smite him at art. fifth and and brother his Niph. escape  
*y · akku'hū hel -ha'χomes ē'rēkūb ū-baḡanāh hū'χī · v nī · mlāt ·*  
 3d pl. perf.

*ū*; and they came into the midst of the house (as if) fetching wheat, and they smote him at the fifth (rib), and Rekab and Baanah his brother escaped (2 Sam. iv. 6); *yakkū* is third plural imperfect Hiphil of *nūkūh* not used; *hēnnāh*, they there, is feminine, perhaps because they are thought as coming in with fear and caution (96).

## SYRIAC.

99. Syriac, called also Aramaic, was the language of Syria or Aram, the highland country to the north-east of Palestine, as far as the Euphrates; and was spoken there until the Mahommedan conquest caused it to be supplanted by Arabic. It is still represented by some Neo-Syriac dialects in the neighbourhood of Lake Urumiyah;<sup>1</sup> and is preserved as a liturgical language by the Maronites and Jacobites, though the knowledge of it is said to be dying out.<sup>2</sup> It was a sister-language to Hebrew. And though it is known to us principally in Christian writings, in which it was subject to a strong Greek influence, from the New Testament and the Greek Fathers of the Church, it is not affected in its essential character by this influence. "The Christian influence," says Fürst, "shows itself in the adoption of Grecisms or entire Greek words or phrases; and in the modification of the existing materials of the language into an accordance with Christian ideas, distinguishing a spiritual meaning from the natural meaning, and forming many abstracts with religious signification. But all this has not made the Syriac an idiom distinguished by peculiarity of structure from the other Aramaic,"<sup>3</sup> which was exempt from this influence. Similarly Renan remarks: "On comparing the Chaldee of the fragments of Esdras, which represent to us the Aramean of the fifth century before the Christian era, with the Syriac which is still written in our day, we can hardly discover between texts composed at so long an interval any essential differences. A slight tendency to analysis, the more frequent employment of prepositions, a richer system of particles, a great number of Greek words introduced into the language,—such are the only points on which innovations are to be observed. One might say that the Aramean language between the two limits which have been indicated has varied no more than the language of Cicero from that of Ennius."<sup>4</sup>

100. The Syriac alphabet is the same as the Hebrew, though the characters differ. But the utterance was stronger in Syriac both in respect of muscular tension and of pressure of breath from the chest, so that it used the harder and more guttural consonants more than Hebrew, and sounded the vowels more fully. Thus very frequently *q* in Syriac corresponds to *k* in Hebrew,<sup>5</sup> and sometimes *k* in Syriac to

<sup>1</sup> Sayce, *Introduction to the Science of Language*, vol. ii. p. 171.

<sup>2</sup> Renan, *Hist. des Langues Semitiques*, p. 277.

<sup>3</sup> *Lehrgebäude der Aramaischen Idiome*, p. 6.

<sup>4</sup> Renan, pp. 277, 278.

<sup>5</sup> Fürst, *sect. 32.*



*g* in Hebrew.<sup>1</sup> Often *q* in Syriac corresponds to *g* in Hebrew,<sup>2</sup> *t* in Syriac to *t* in Hebrew, *t* in Syriac to *d* in Hebrew,<sup>3</sup> *p* in Syriac to *b* in Hebrew,<sup>4</sup> *s* in Syriac to the weak *s* or *sin* in Hebrew,<sup>5</sup> *t* or *g'* in Syriac to *t'* in Hebrew,<sup>6</sup> *t* in Syriac to *s* in Hebrew,<sup>6</sup> *d* or *s* in Syriac to *z* in Hebrew.<sup>6</sup> In Syriac the *t*-utterance prevails over the *s*-utterance, in Hebrew the latter over the former.<sup>7</sup> There is no distinction in writing made as in Hebrew between the hard state of *b, g, d, k, p, t*, and their soft state after a vowel. *N* occurs in Syriac for Hebrew *m*, *l* or *r* for *n*, *r* for *l*.<sup>8</sup>

In Syriac also *ā* corresponds to Hebrew *ā*, *ī* or *i* to Hebrew *ē*, *ū* or *u* to Hebrew *ō*;<sup>9</sup> and, unlike Hebrew (75), Syriac has diphthongs;<sup>10</sup> but sometimes two vowels represent a long vowel intermediate between the two.<sup>11</sup>

The guttural spirants or aspirates have an affinity for *a*.<sup>11</sup> In Syriac *g* was uttered so softly as to be often treated like *h*,<sup>12</sup> owing probably to foreign speakers.

The peculiar feature of the Syro-Arabian languages is the opening of the root and the incorporation in it of the vowels which denote the process of the being or doing. In consequence of this mode of expression it is contrary to the general habit of these languages that a syllable should begin with two consonants. And when at the beginning of a word two consonants are not separated by an intervening vowel, a syllable is apt to be prefixed which takes up the first of them as its final consonant. Syriac, however, admits two consonants at the beginning of a syllable, never at the end. But to foreign words beginning with two consonants it often prefixes a syllable beginning with *h*, sometimes with *h* or *s*, or even with *χ* or *g'*. Syriac carries this habit of prothesis farther than Hebrew or Arabic, for it sometimes prefixes a prosthetic syllable to a word beginning with a single mute, and this sometimes has the effect of doubling the initial mute.<sup>13</sup>

The object of this in the latter case seems to be to give more energy to the utterance of the initial by making it stop the voice, for it cannot be regarded as a softening of the initial when in fact it often hardens it by doubling it. It is an effort to utter that consonant with more fulness by strengthening the beginning of it, and corresponds to a tendency to utter with force so as to give both tension and fulness to all the elements. Such superior energy of expression would account for the consonants having more tension and the vowels more fulness in Syriac than in Hebrew. But this is accompanied also by a tendency to save the consonants from being impaired by compression. The latter effort led Syriac to avoid doubled mute consonants, though they sometimes arose from the strengthening of an initial mute by a prosthetic syllable or from assimilation, as *ḥettaqṭal* from *ḥettaqṭal*, by assimilation of *h*. The first of the two was mostly replaced by a nasal, usually *n*, or a vibratile, usually *r*, or by the lengthening of the pre-

<sup>1</sup> Fürst, sect. 33.<sup>2</sup> Ibid. sect. 34.<sup>3</sup> Ibid. sect. 35.<sup>4</sup> Ibid. sect. 36.<sup>5</sup> Ibid. sect. 38.<sup>6</sup> Ibid. sect. 39; Cowper, Syriac Gram., sect. 24.<sup>7</sup> Fürst, sect. 40.<sup>8</sup> Cowper, sect. 24.<sup>9</sup> Fürst, sect. 84.<sup>10</sup> Cowper, Syriac Gram., sect. 15; Fürst, sect. 86.<sup>11</sup> Fürst, sect. 87.<sup>12</sup> Cowper, sect. 38.<sup>13</sup> Fürst, sects. 56-58, 60; Cowper, sect. 52.

ceding vowel.<sup>1</sup> The same effort led to that transposition and assimilation of consonants which is a feature in Syriac,<sup>2</sup> and by means of which collisions are avoided and the consonants interfere less with each other's utterance. Such an effort would be the natural effect of that compression of the roots which is a distinguishing characteristic of this language; and while, on the one hand, the habit spread of facilitating the utterance of the consonants by such euphonic changes, on the other hand, weak consonants would be liable to be lost<sup>3</sup> in the habitual compression. There seems also to have been in Syriac a decay of affixes<sup>4</sup> by reason of the weakness with which they came to be thought.

101. The personal pronouns and affixes are given in 51. The demonstrative pronouns are *hon*, *honō*, masculine singular; *honun*, masculine plural; *hode*, feminine singular; *honēn*, feminine plural; *holēn*, *hailēn*, common plural.<sup>5</sup>

The interrogative pronouns used also for indefinites are *man*, who? *mō*, *mon*, *mono*, what? *haino* masculine, *haido* feminine, are sometimes used for who?

The usual relative is *d*, sometimes *dē* for both genders and numbers.<sup>6</sup>

102. The primitive verbal stem, so long as it has only three consonants, is always monosyllabic, the first two consonants having only sheva between them. But there are verbal stems formed from nouns and particles for which this does not hold.<sup>7</sup>

The vowel between the second and third consonants of the triliteral verbal stem is generally *a*, but may be *u* or *e*; the *e* is more frequent in intransitive verbs;<sup>8</sup> *u* is less frequent than *e*, and not clearly distinguished from it in significance.<sup>9</sup>

There are many derived forms to be met with, but the principal are two, the intensive (Heb. Piel) and the causative (Heb. Hiphil); and these, as well as the ground form, have each a reflexive. Peal (Kal) *qṭal*, reflexive *ḥetqṭel*, the vowel of the root being changed to *e*, which corresponds to reduced movement of the action as passing from the subject (54); Pael (Piel) *qatēl*, reflexive *ḥetqatēl*, the last vowel in *qatēl* being reduced to *e* as in Hebrew, and that of the reflexives of Pael and Aphel corresponding to what it is in Hebrew Pual and Hophal (79), the other vowels being broader than in Hebrew (100); Aphel (Hiphil), *ḥaqṭel*, reflexive *ḥettaqṭel*; sometimes *ḥ* remains instead of the second *t*. There is also a form called Shaphel, causative like Aphel, viz., *saqṭel*, reflexive *ḥestaqṭel*, but in most grammars and lexicons it is treated as a quadriliteral stem.<sup>10</sup> For there are quadriliteral and pluriliteral formations analogous to the triliteral.<sup>11</sup> The verb has a perfect and imperfect like Hebrew, an imperative, infinitive, and participle. It expresses a present active and passive by using the personal pronouns in their full form after the participle agentis *qatēl* and the participle patientis *qṭēl*. The perfect of the verb to be, after the participle

<sup>1</sup> Fürst, sect. 62.

<sup>2</sup> Ibid. sects. 61, 66; Cowper, sects. 28, 29.

<sup>3</sup> Cowper, sect. 69.

<sup>4</sup> Ibid. sects. 70-74.

<sup>5</sup> Cowper, sect. 78.

<sup>6</sup> Ibid. sect. 147; Cowper, sects. 79, 95. 4.

<sup>7</sup> Ibid. sects. 54, 55, 70.

<sup>8</sup> Fürst, sect. 79.

<sup>9</sup> Fürst, sect. 103.

<sup>10</sup> Fürst, sect. 112.

<sup>11</sup> Fürst, sect. 106.

agentis expresses the Latin imperfect, and after the perfect it expresses a pluperfect.<sup>1</sup> The participial formations express the verb less subjectively than the tenses; and the auxiliary coming last shows that the verb is thought in its general associations as an outer fact rather than under subjective limitations. The personal affixes are given in 51. The stem vowel *a* changes to *e* before the person endings *-et* and *-at* in the first singular and third singular feminine of the perfect of Peal, as the tone falls on the person ending.<sup>2</sup> The stem vowel *a* becomes *u* in the imperfect Peal; but in intransitive verbs the vowel of the imperfect is generally either *a* or *e*.<sup>3</sup> The stem of the imperative Peal is the same as that of the imperfect.<sup>4</sup>

The infinitive Peal is mostly formed by prefixing *me-* to the verbal stem. The infinitive of the derived forms ends in *ū*.<sup>5</sup> There is no distinction of nominal and verbal infinitive.<sup>6</sup>

The participle patientis of intransitive verbs may have a merely intransitive meaning; but it often has *a* after the first consonant in intransitive verbs, as if these when thought as passive got a sense as of issuing from an external source, and it sometimes has this *a* from euphony, as in verbs beginning with *h*.

The reflexives are used for passives,<sup>7</sup> there being little sense of the affection of the object (79).

The personal prefixes of the imperfect of Pael and Shaphel and other unusual conjugations have no vowel, and take a prosthetic syllable with *h*.<sup>8</sup>

103. The objective personal suffixes are given in the table, 51.<sup>9</sup>

The objective suffix of a verb cannot be of the same person as the verb except in the third singular. A verb ending in a vowel takes a suffix without one, and a verb ending in a consonant takes the suffixes with a connecting vowel as given in the table, except that all forms of the verb ending in *n* have *o* for the connecting vowel.<sup>9</sup>

In the imperfect the forms which end in the third radical, when taking the objective suffixes, reject the vowel of the last syllable, except with the objective suffixes of second plural, before which it remains; for these being heavier, the verb does not take them up so readily or run into them. Forms ending in *n* remain unchanged, but connect the suffix by *o*.<sup>10</sup>

The imperative masculine singular inserts *i* as a connective vowel between the verb and the objective suffixes.<sup>11</sup> In the imperative singular feminine and plural masculine *i* and *u* are lengthened before the objective suffixes, and in the plural the vowel is transposed from the second to the first radical.

The infinitive Peal drops its last vowel before all the suffixes except *kūn* and *kēn*. In the other derived forms the infinitive adds *t* after *ū* before the suffixes.<sup>11</sup>

104. The genders of the noun are masculine and feminine. Some nouns are either masculine or feminine.

<sup>1</sup> Cowper, sect. 82.

<sup>2</sup> Ibid. sect. 86. 2; Fürst, sect. 109.

<sup>3</sup> Cowper, sect. 87.

<sup>4</sup> Ibid. sect. 89.

<sup>5</sup> Ibid. sect. 90.

<sup>6</sup> Fürst, sects. 113, 130.

<sup>7</sup> Cowper, sects. 79, 92.

<sup>8</sup> Ibid. sect. 93. 7.

<sup>9</sup> Ibid. sect. 101.

<sup>10</sup> Ibid. sect. 103.

<sup>11</sup> Ibid. sect. 105.

Names and appellations of men are masculine. So also are those of nations, mountains, rivers, and months.

The names and appellations of women, regions, cities, islands, and such members of the body as are double are feminine.

Other nouns are known to be feminine, not by their signification, but by their having a feminine ending. This is *ā*, *ū*, *ī*, *ot*, or in the emphatic state *tō*; but nouns may have these endings as part of the expression of the substantive idea without being feminine. The feminine ending forms abstract substantives from verbs and adjectives.<sup>1</sup>

Some names of animals, the numerals from twenty to a hundred, and some other nouns, are either masculine or feminine; and their gender can be determined only by the connection in which they stand.<sup>1</sup>

105. Nouns have so much of a verbal nature that, as in Arabic and Hebrew, they seem to be very generally derived from verbs,<sup>2</sup> and the compression of the stem of the verb by reducing or dropping the vowel from between the first two consonants, extends to the stem of the noun also.

But there are also nouns derived from other nouns. Thus diminutives are formed by adding the termination *-ūn* or *-ūs*, or by inserting *u* before their termination.<sup>3</sup>

Nouns are used in juxtaposition with each other to express a composite idea.<sup>4</sup>

106. Nouns have a plural ending, which, for masculine, is *-īn*, the last letter of the stem being dropped if it be *h*, *i*, or *y*; for feminine, *-on*, a final *ī* or *ū* becoming *y* or *w*.<sup>5</sup> The feminine plural ending has a distinct element *n* like the masculine, and is not a mere lengthening of the vowel as in Hebrew.

A dual ending *-ēn* still remains in four nouns.<sup>5</sup>

Some masculine nouns have their plural of feminine form (82).

Some feminine nouns have their plural of masculine form; and of these some drop the feminine ending altogether, others retain the *t* in the plural.

Some nouns have plural of both masculine and feminine form.

Juxtaposed nouns with composite meaning form their plural on the first noun, or on the second, or on both.

Some nouns insert *i*, or *u*, or *h* before the plural ending.

When a final radical *n* is dropped before the feminine ending in the singular it generally reappears in the plural.

Some nouns have no plural form, others no singular; some are alike in singular and plural, except in the vowel pointing.

The plural of foreign, and especially of Greek words is regular, but the termination used is not decided by the gender of the original noun; it is commonly the masculine, seldom the feminine.

Greek terminations of number are not only sometimes adopted in Greek words, but even affixed to Syriac words.<sup>6</sup>

<sup>1</sup> Cowper, sects. 132, 177. 2; Fürst, sects. 131, 181.

<sup>2</sup> Cowper, sects. 135-144.

<sup>3</sup> Ibid. sect. 147.

<sup>4</sup> Ibid. sect. 148.

<sup>5</sup> Ibid. sect. 149.

<sup>6</sup> Ibid. sects. 150, 151.

107. Nouns have not only a construct state as in Hebrew (83), but also an emphatic or demonstrative state, formed in singular masculine by adding *-ō* with or without change of vowels; in the plural masculine by changing *-in* to *-ē*, the *n* being dropped, and the vowels coalescing into *e*; in singular feminine, ending in *ō*, *ā*, *ī*, by adding *-tō*, *-ō* being dropped, and various changes made in the vowels; in plural feminine by changing *-on* to *-otō*.<sup>1</sup> In the feminine singular and plural *t* belongs to the noun, *ō* is the emphatic suffix. There is no nominative ending.<sup>2</sup>

The construct state is almost like the original form of the noun, and in the singular masculine it is the same; but in plural masculine it changes *-in* to *-ai*; *-ēn* becomes *-yai*; in singular feminine *-ū* and *-ī* become *-ūt* and *-īt*, and *-ō* becomes *-at* (83); in plural feminine the ending is *-ot*.<sup>1</sup>

The stems of nouns undergo various changes in assuming the various endings and suffixes.<sup>3</sup> The possessive suffixes are given in 51.

108. The system of the numerals is like Arabic and Hebrew. The masculine forms of the cardinals, except one and two, go with feminine nouns, and the feminine forms with masculine nouns.<sup>4</sup>

Fractions may be expressed by peculiar forms of the cardinals, as *rūbjō*, a fourth, from *harbaġ*, four.<sup>4</sup>

109. Adverbs of quality from nouns, adjectives, and participles end in *ohīt*.<sup>5</sup>

Syriac has the prepositions *b*, *d*, *l*, *men*, and many nouns used as prepositions. Some prepositions take the personal suffixes like plural nouns.<sup>6</sup>

Its conjunctions are similar to those of Hebrew, except that it has adapted many from the Greek, as *ἀλλὰ*, *γὰρ*, *καὶ*, &c.<sup>7</sup>

110. Adjectives are more usual in Syriac than in Hebrew, but substantives governed in the genitive are very often used instead, as  
 spirit rel. holiness                      I rel. flesh                      I  
*rūxō dē · qūdso*, Holy Spirit; *henō d · a · bsar hanō*, I am carnal;  
 law    emph. rel. spirit 3d masc.                      indef. pron. pl. rel.  
*nomus · ō d · ruḫ (h)ū*, the law is spiritual; *hail · en d ·*  
 God    emph.  
*halloh · ō*, divine things<sup>8</sup> (114).

There is no adjectival expression of degrees of comparison; but sometimes the emphatic state expresses the superlative.<sup>9</sup>

111. Adjectives of possession, custom, likeness, &c., are generally denoted by a periphrasis, the element of possession, &c., being expressed by a noun, and that which would be the root of the adjective being another noun, governed by the former, as in the genitive<sup>10</sup> (86).

Self also is often expressed as in Hebrew by a noun.<sup>11</sup>

112. The emphatic suffix of the noun in Syriac differs from the definite article in Arabic and Hebrew. The article affects the sub-

<sup>1</sup> Cowper, sect. 153.

<sup>2</sup> Fürst, sect. 184.

<sup>3</sup> Cowper, sects. 154-164.

<sup>4</sup> Ibid. sects. 165, 166.

<sup>5</sup> Ibid. sect. 169.

<sup>6</sup> Ibid. sect. 170.

<sup>7</sup> Ibid. sect. 171.

<sup>8</sup> Ibid. sect. 176. 2.

<sup>9</sup> Ibid. sects. 188, 189.

<sup>10</sup> Ibid. sect. 176. 5.

<sup>11</sup> Ibid. sect. 202.

stantive idea, limiting it by defining or particularising it; the emphatic suffix merely strengthens the idea with additional attention to it. The noun in Arabic and Hebrew is thought more generally than in Syriac, more in the attributive part and less in the substance (Def. 4); and when a definite or particular idea is to be expressed, the general idea having been first thought, is then affected with the limitation, and then thought as limited; and the interest of the last thought overpowering the first, the first does not get expression, but the limitation of the article is followed in expression by the limited noun (Def. 23). On the other hand, the noun in Syriac, thought more particularly, does not, after having been emphasised, differ sufficiently from the noun in its simple state to overpower the latter, but this gets expression in its natural place, being followed by the emphatic element, and the emphasised idea is supplied without expression.

A noun governing a genitive can be emphatic, but the genitive then generally has the relative *d* prefixed.<sup>1</sup>

113. Nouns used figuratively are often treated as of the gender of those which they represent (96), thus <sup>beast wild</sup> *ḫaytō senō*, wild beast, though feminine, when it stands for Antichrist is masculine; so *mettō*, word, which is feminine, when it means Christ is masculine.<sup>2</sup>

An abstract noun put for a concrete may take its gender. Thus a feminine noun signifying an office may be treated as masculine when it stands for those who fill the office.<sup>2</sup>

An adjective sometimes appears in a different gender from its noun; and the same is true of pronouns.<sup>3</sup>

The quality, instead of agreeing with the substance of the noun, is sometimes expressed by an adverb, which sometimes precedes, with relative between.

Nouns which are plural only are represented by pronouns, sometimes singular and sometimes plural. A plural pronoun masculine may follow a feminine collective when it applies to men.

The plural of excellence does not properly belong to Syriac. Sometimes, however, the poets use the plural for the singular to give intensity to a word.<sup>4</sup>

114. The apposition of a proper name to its general noun is sometimes expressed like a genitive with the relative *d* prefixed, as <sup>country</sup> *d-mūsā*, country of Mysia<sup>5</sup> (66).

The genitive may be denoted by following a noun which is in the construct state, but is more frequently expressed by prefixing to it *d*; and with this prefix it may follow a noun which is in the construct state.<sup>6</sup>

The construct state is often used when followed by a noun with a preposition prefixed to it<sup>7</sup> (90).

The noun in construct state, followed by the noun which it governs, serves to express a variety of relations, about, among, by, for, &c.<sup>8</sup>

<sup>1</sup> Cowper, sect. 178. 2.

<sup>2</sup> Ibid. sect. 179.

<sup>3</sup> Ibid. sect. 192. 3.

<sup>4</sup> Ibid. sects. 22, 71, 99, 180.

<sup>5</sup> Ibid. sect. 181.

<sup>6</sup> Ibid. sect. 183.

<sup>7</sup> Ibid. sect. 184.

<sup>8</sup> Ibid. sect. 185.

The objective case is occasionally denoted in the Old Testament by the word *oit*<sup>1</sup> (92).

Verbal nouns may govern an object like the verb.<sup>2</sup>

Cardinal numerals from 3 upwards either precede or follow their noun. If the noun precedes, it generally takes the numeral in the emphatic form, but if it follows, in the absolute; but this rule is not uniform.<sup>3</sup>

115. Adjectives and participles follow their nouns, but demonstrative pronouns are wont to precede. Where an adjective and pronoun are both used, the common order is, substantive, pronoun, adjective; but even this is not uniform. When an adjective is emphatic it often precedes the noun.<sup>4</sup>

A possessive suffix which is thought as affecting a substantive object expressed by a noun governing a genitive, is generally attached to the genitive, as *ḡmō de · qudš · i*, <sup>name rel. holiness my</sup> name of my holiness; for my holy name<sup>5</sup> (88).

The object suffix is very often used with the verb though the object follows (92), and the possessive suffix frequently with the noun or preposition though the governed noun follows, as *ba · ḡm · eh d'yaṣūḡ*, <sup>in name his rel. Jesus</sup> in the name of Jesus.<sup>6</sup>

The relative *d* prefixed to demonstrative pronouns and adverbs, makes them relative (92); and is used like *h<sup>a</sup>ser* in Hebrew.<sup>7</sup>

116. The pure copula seems to be too fine an element to be thought separately as a verb (92); and it often coalesces with the thought of a personal pronoun as subject, being expressed by the pronoun. The pronoun thus involving the copula may combine with the predicate being subjoined to it, and the union is then so close as to impair the initial of the pronoun.<sup>8</sup> Formations of this kind with the participles are much used (102).

For the same reason also (86, 92, 111), the verb substantive takes up an objective thought of existence which is expressed by the substantive *h<sup>i</sup>t*, which corresponds to Hebrew *yēš* existential. This substantive, with possessive suffix of the various persons, and involving the copula, is often used for the verb to be.<sup>9</sup> It takes the suffixes of a plural noun.

117. The uses of the perfect and imperfect are similar to Hebrew, except that the present and the Greek imperfect are more frequently expressed by the participle and personal pronoun than by the imperfect, and that the imperfect is very rarely used for the past.<sup>9</sup> There is thus more distinction of present, past, and future in Syriac, than in Hebrew or Arabic.

The imperfect, as in Hebrew, is used for the subjunctive.<sup>9</sup>

The infinitive gives intensity to a verb, and generally precedes it (92). The infinitive *Peal* is not prefixed to the derived forms, but a noun or

<sup>1</sup> Cowper, sect. 186.

<sup>2</sup> Ibid. sect. 185.

<sup>3</sup> Ibid. sect. 190.

<sup>4</sup> Ibid. sect. 192.

<sup>5</sup> Ibid. sect. 197. 2.

<sup>6</sup> Ibid. sect. 198.

<sup>7</sup> Ibid. sect. 200.

<sup>8</sup> Ibid. sects. 196, 226.

<sup>9</sup> Ibid. sects. 205, 206, 212.

adjective is sometimes used in the same sense. The infinitive is very rarely used as a noun.<sup>1</sup>

The imperfect, with *d* prefixed, is often used as the object of another verb. Occasionally, however, *d* is omitted; and sometimes this imperfect precedes its governing verb.<sup>2</sup> This corresponds to the English translation of *gauleo te valere*, I rejoice that you are well.

Certain verbs often precede another verb in the same gender, number, and person, to affect it adverbially<sup>3</sup> (87). The second verb may be in the infinitive.<sup>4</sup>

The irregularities in respect of concord of verb and subject, in gender and number, which have been mentioned in 96 as existing in Hebrew, are much the same in Syriac.<sup>5</sup>

The *constructio pregnans* (93) also is used.<sup>6</sup>

The arrangement of the parts is for the most part as in Hebrew; but the order, subject, object, verb, which, Gesenius says, is common in Aramaic, is seldom found in Hebrew, and only in poetry.<sup>7</sup>

## ETHIOPIC.

118. In Tigré, the northern province of Abyssinia, the Ethiopic language was spoken; and with the predominance of the people who spoke it, it spread from Tigré and its chief city Axum, so as to be the principal language of the kingdom, and to reduce the languages of other tribes to mere popular dialects.<sup>8</sup> It came originally from Yemen, the region which forms the south-western corner of Arabia, and was brought into Abyssinia by the Gheez or free wanderers, as the immigrants were called.<sup>9</sup> The ancient language of Yemen, the Himyarite, is described by all the Arabian writers as so different from the Arabic of Central Arabia that often the speakers of the two were unintelligible to each other.<sup>10</sup> And Yemen is in fact quite a different region from Central Arabia, being within the province of the half-yearly rains. It is covered about Mareb and Sana with ruins, in which Himyaritic inscriptions are found in great abundance, supposed to have been written in the third and fourth centuries of our era.<sup>11</sup> The alphabet used in these inscriptions appears evidently to be the prototype of the Ethiopic alphabet, being identical with that of the inscriptions of Axum of the fifth century;<sup>12</sup> and they are both so different from the other Syro-Arabian alphabets, that if all had a common source in the Phœnician, the Himyarite-Ethiopic must have separated from the others in a remote antiquity.<sup>13</sup>

Notwithstanding this similarity of the characters, the language of the Himyaritic inscriptions is quite distinct from the Ethiopic<sup>14</sup> as known to us in writings. The earliest of these writings is a version of the Bible, written probably in the fourth century;<sup>15</sup> and the

<sup>1</sup> Cowper, sects. 209, 210.

<sup>2</sup> Ibid. sect. 210. 4.

<sup>3</sup> Ibid. sect. 210. 6.

<sup>4</sup> Ibid. sect. 224.

<sup>5</sup> Ibid. sects. 214–216.

<sup>6</sup> Ibid. sect. 225.

<sup>7</sup> Gesenius, Hebrew Grammar, sect. 142. 1.

<sup>8</sup> Dillmann, Gram. Æthiop., p. 1.

<sup>9</sup> Ibid. p. 2.

<sup>10</sup> Renan, Hist. des Langues Semitiques, p. 308.

<sup>12</sup> Ibid. pp. 316, 328.

<sup>13</sup> Ibid. p. 316.

<sup>14</sup> Dillmann, p. 8.

<sup>15</sup> Renan, p. 333.



Ethiopic must have separated at a much earlier date from its sister languages of South Arabia.<sup>1</sup>

The Himyarite language is believed to be still spoken by the Ekhili between Hadramaut and Oman, and especially in the region of Mahrah, Mirbat, and Zhefar.<sup>2</sup>

The Ethiopic language, after having been the medium of a considerable Christian literature, consisting principally of translations from Greek, but including also original hymns after the model of the Psalms, followed the fortunes of the race to which it belonged. When the south-western provinces of Abyssinia rose in importance, and the seat of government (about A.D. 1300) was moved south of the Takazze towards the Sana lake, the Amharic became the language of the court; but still Ethiopic remained the literary language, in which all books and all official documents were written, and into it translations were made from Arabic, and sometimes from Coptic. At length the repeated incursions of the Gallas, beginning about the end of the sixteenth century, gave it its death-blow, and with the culture and literature of the country the old language perished. It has continued indeed even to the present day as a sacred ecclesiastical language, and up to the last century books were written in it, especially the annals of the country, but it was understood only by the learned, and even they wrote more readily in Amharic.<sup>3</sup>

119. Ethiopic makes less use than Arabic of vowel changes to express modifications of the radical idea, and it takes less note of the differences of the vowels. In its alphabet there is no distinction made between *ē*, *ī*, and *ū*, and the same character serves for a consonant which has one of these vowels, and for the same consonant without any vowel at all. It distinguishes, however, *ē* and *ō*, as well as *ā*, *ū*, *ī*, and *ă*; and in some cases an originally short *i* or *u* has been lengthened so as to preserve it on account of its significance.<sup>4</sup> As in Arabic, *ā* often stands for *ō*.<sup>5</sup>

This loss of discrimination of the vowels must have already taken place when their notation in the alphabet was first used, which was about the fifth century after Christ; for though there are small Ethiopic inscriptions in which there is no trace of the notation of the vowels, in the Axumite inscriptions copied by Ruppell it is half developed.<sup>6</sup>

In later pronunciation *ve* and *ye* came to be sounded as *u* and *i*, so that these vowels reappeared in the spoken language.<sup>6</sup>

The vowels of a word are not subject to change, as in Hebrew, in consequence of additions or reductions in the word, or alteration in the position of the accent.<sup>7</sup>

In respect of the tendency to vowel utterance, Ethiopic is about on the same grade as Hebrew.<sup>8</sup>

120. In early times the language had given up the Arabic consonants *θ*, *θ*, and *ʔ*.<sup>9</sup>

But these consonants have characters appropriated to them in the Himyarite alphabet,<sup>10</sup> and the loss of them as well as the other

<sup>1</sup> Dillmann, p. 8.

<sup>3</sup> Ibid. pp. 334, 335; Dillmann, pp. 1, 2, 9.

<sup>5</sup> Ibid. p. 29.

<sup>8</sup> Ibid. p. 33.

<sup>6</sup> Ibid. p. 30.

<sup>9</sup> Ibid. p. 34.

<sup>2</sup> Renan, pp. 309, 311.

<sup>4</sup> Dillmann, pp. 20, 28.

<sup>7</sup> Ibid. p. 32.

<sup>10</sup> Ibid. p. 13.

peculiarities of the Ethiopic consonants compared with the Arabic were developed in Abyssinia, and have all an African character.

That character (see I. 8, 24, 25, 35, 57, 74 ; III. 126, 161) exhibits generally the tendency to utter the consonants without that tension which is given to them by pressure of breath from the chest, and this is apt to detach the consonant from the vowel which follows it (Def. 26). This tendency is to be seen in all the changes which the Arabic consonants have undergone in Ethiopic.

The failure of the tension from the chest rendered it necessary either to speak with breath from the chest without tension or to utter the consonants with the breath that was in the mouth or above the larynx, pressing this on the seat of the utterance by contraction of the parts behind. The latter tends to give hardness by the compression, the former to reduce the consonant to a breathing. Both tend to cause the decay of those gutturals, which require for their due utterance tension from the chest. The tenuis *q* indeed can be uttered with compression of the cavity between the larynx and the root of the tongue ; and the utterance of the post-palatal *k* in the same way tends, in the effort to contract the space behind, to move the closure of the tongue backwards so as to produce *q* ; and thus sometimes this consonant was favoured, *k* being restricted to a weaker utterance.<sup>1</sup> But *q* was reduced so as to approach to *k* ; and *ḫ* and *χ* gradually gave up their tension, and came to be uttered like *h*,<sup>2</sup> though in some cases the effort to give tension without pressure from the chest hardened these consonants to *q*, *k*, or *q*.<sup>3</sup>

The effort to compress the breath in the mouth, in order to make the utterance sensible, was unfavourable to the soft consonants *q*, *θ*, and *θ*, and these were early given up ; but *t* and *t* were strongly uttered, the former "with a raising of the root of the tongue against the hinder part of the gums,"<sup>4</sup> the latter with a dental sibilation ; *q* was preserved as well as *d* ; but *t* tended to prevail over it. And though there are many exceptions, the more usual correspondences are *t* or *t* to *d* in the other languages, *t* to *d* and *θ*, *t* to *d* *θ* *d* *z* *s* or *s*, and *d* or *z* to *θ*.<sup>5</sup> It is better in Ethiopic to write *t* instead of *t*. For in Amharic there is a true *t* in addition to the *t*, though *t* originally was ante-palatal.<sup>6</sup>

The same tendency to compression produced, among the labials, *p* uttered explosively with compression of the mouth, and an aspirate *p'* in which the aspiration is sent over the tongue to the lips producing an accompanying sibilation.<sup>7</sup> In the Gā also (I. 62) there is a labio-lingual *f*.<sup>8</sup>

The dental sibilant *s* tended to prevail over the ante-palatal *s*,<sup>9</sup> because it admitted a larger cavity between the tongue and the palate, by contraction of which a sibilation was more easily produced.

The detachment of the consonant from the vowel which follows it, appears in the peculiar utterance of *p*, in which "the breath puffs off from between the lips before the vowel is heard ;"<sup>10</sup> and also in the

<sup>1</sup> Dillmann, p. 39.

<sup>2</sup> Ibid. pp. 34, 38.

<sup>3</sup> Ibid. p. 40.

<sup>4</sup> Ibid. p. 43.

<sup>5</sup> Ibid. pp. 44, 48, 52.

<sup>6</sup> Gesenius, Hebrew Lexicon, p. 778.

<sup>7</sup> Dillmann, p. 45.

<sup>8</sup> Zimmermann, p. 5.

<sup>9</sup> Dillmann, p. 51.

<sup>10</sup> Ibid. p. 45.

tendency of the gutturals and post-palatals *q*, *χ*, *k*, and *g*, to incorporate *w* before any vowel except *ū* or *ō*. This *w* sounds breath which would be lost to vocal utterance in the beginning of the vowel if this were uttered through open organs after a consonant which involved little pressure of breath from the chest (Def. 26). Being close it lets little breath pass, and it produces a compression of breath, the removal of which reinforces the vowel following.<sup>1</sup> This feature is found in many African languages, which also tend to insert *y* in the same way by reason of their palatal nature.

The vowels *ū* and *ō* combine more closely than the others with the post-palatal and guttural consonants, so that probably the breath for their utterance presses on the organs before the closure is opened.

The tendency to incorporate *w* is brought into action generally where an original *u* has been either changed into another vowel or *v*, or absorbed by the consonant as *w* on account of the affinity of the consonant for it. And this may take place not only when the *u* follows the consonant immediately, but even when it follows a preceding or following consonant. But sometimes the *w* is taken by *g* when *g* with *w* takes the place of *k*, *q'* or *q* without it, and sometimes by *k*, when *kw* takes the place of *q* or *χ*, *χ*; the *w* making the softer consonant harder and more guttural, and therefore less different from the consonant for which it stands. Sometimes also the *w* is taken when such occasions for it are not present; as, on the other hand, sometimes *w* is not taken when such occasions might seem to invite it.<sup>2</sup>

121. Ethiopic, like Arabic, admits open syllables with a short vowel accented or unaccented; and, like Hebrew, it admits closed syllables with a long vowel without requiring, as Hebrew does, that the vowel should be accented. It also admits two consonants at the end of a word. And every syllable must begin with a consonant, and, as originally formed, only with one.<sup>3</sup> The general rule is that before two consonants at the end of a word the vowel must be short. But when the first of the two is a guttural or post-palatal spirant, an *a* preceding it must be long; and when it is *y* or *v* it may sustain a long vowel before it.<sup>4</sup>

The concurrences *ā + i* and *ā + u* generally form the diphthongs *ai*, *au*, but often the long vowels *ē*, *ō*, which may also arise from *ia*, *ua*. If the first vowel be long the second becomes a semi-vowel.<sup>5</sup>

The post-palatal and guttural spirants are helped in their utterance by a vowel preceding or following them. The vowel for which they have most affinity is *a*; but if they have another vowel than *a*, then an *a* preceding is, by attraction of the spirant with this vowel, apt to be changed to *e*. They tend to lengthen a preceding vowel, giving their breath partly to it, and are themselves weakened thereby, and may be lost; but instead of giving breath to the vowel they may take breath from it and reduce it to *ē*. When uttered with an *a* following them they have an attraction for the accent.<sup>6</sup>

The semivowel *v*, which was probably uttered from the throat as

<sup>1</sup> Dillmann, p. 67.

<sup>2</sup> Ibid. p. 41-43.

<sup>3</sup> Ibid. p. 55-57.

<sup>4</sup> Ibid. p. 58.

<sup>5</sup> Ibid. pp. 63, 64.

<sup>6</sup> Ibid. p. 68-74.

well as from the lips, is in Ethiopic much weaker than *y*, and the vowel *u* than *i* (see 75); the muscular action of the organs in uttering *y* and *i* being much the stronger. Yet as a first radical, *y* is very rare, and *v* very frequent, the language being kept guttural by the tendency to combine *w* with the gutturals and post-palatals.<sup>1</sup>

A final *q* of a verbal stem assimilates to itself an initial *k* of the person ending; and a final *t* or *d* of a noun assimilates to itself *t* of the feminine ending; *t* and *d* before *s* become *s*.<sup>2</sup>

The accent is most frequently on the penultimate syllable, more frequently on the antepenultimate than on the ultimate. A vowel long by nature or position has an attraction for the accent, as well as a syllable with a strong meaning. There are many enclitic monosyllables.<sup>3</sup>

A long vowel in a syllable tends to reduce the vowels in the adjacent syllables; *ā* and *ū* prefer *ē*, but *ī*, which takes less breath, is content with *ā*.<sup>4</sup>

122. Pluriliteral verbal roots are formed by repeating a whole root, generally reduced to a monosyllable, or the last two radicals of a root, or by inserting *n*, sometimes *r*, after a first radical. The duplications express ideas which involve repetition, movement, duration, intensity, completion; but generally the simple roots from which they were formed are no longer found. Sometimes in a root consisting of a closed syllable repeated, the second consonant is assimilated to the third, so as to double it, and thus (and thus only) roots are formed whose first and second consonants are the same.<sup>5</sup>

Verbal roots also consist sometimes of a trilateral root with a formative prefix, being originally derived forms, which came subsequently to be thought as simple verbs; and sometimes they consist of a trilateral root or short noun with *ya*, *ra* subjoined, which as final syllable of a root, whether trilateral or pluriliteral, has generally a causative or transitive significance.<sup>6</sup>

Less frequently a guttural spirant is added instead of *y* or *v*. Nominal stems also are turned into verbal stems without dropping their nominal formatives.

Roots with more than three letters are so numerous in Ethiopic that they form a sixth or seventh of all the roots of the language.<sup>7</sup>

123. This large development of roots having more than three radicals is a remarkable feature of the Ethiopic language. Their mode of formation is for the most part quite according to the genius of the Syro-Arabian languages. Many of them, as has been said, are regular derived forms from trilateral roots. And the reduplication which shows itself in others is not only to be seen in the second, fifth, ninth, and eleventh derived forms of the Arabic verb and in some of the Arabic quadrilaterals, but is in agreement with a tendency which may be observed in these languages to strengthen an idea by repetition rather than by a comparative element, owing to their weakness in comparative thought (66, 92, 117). The formation, however, of a

<sup>1</sup> Dillmann, pp. 82, 104.

<sup>2</sup> Ibid. p. 84.

<sup>3</sup> Ibid. p. 90.

<sup>4</sup> Ibid. p. 91.

<sup>5</sup> Ibid. p. 101.

<sup>6</sup> Ibid. pp. 105, 111.

<sup>7</sup> Ibid. p. 107-113.

root with a transitive or causative significance by subjoining an element instead of prefixing one, does not agree with the true Syro-Arabian subjectivity. For the original root to which this addition was made, being placed first, must have been thought in its general associations among the facts of the world, showing the predominance of an external interest, instead of being limited by a subjective prefix to the thought of it as launched from a subject to an object. But the most noteworthy character of these pluriliterals is that they are thought as roots, not as derivative stems, the roots from which they were originally formed having for the most part disappeared from the language.<sup>1</sup>

Now, in the process of this displacement, the original roots must have become quite merged in the new formations; for if they had continued to be felt in these in their integrity they would have still remained in the consciousness of the race. The new formations, as they were used in speech, must have become abbreviated and reduced in meaning, and the original roots been thereby so weakened as to lose their original significance. So that in this feature of the language we have evidence of a contraction of the object thought by the mind in a single act such as might be expected from African influence (see II. 3).

The old roots in these formations might be regarded as having an analogy to Indo-European roots, which are not found separate. But it is only in these formations which have added elements either before or after the roots that such analogy is apparent. The reduplicated roots are not agreeable to the Indo-European genius, which affects its roots not so much with reduplication as with relative or comparative elements.

This tendency to contract the single acts of thought would be favoured by any weakness of the sense of the root or of the derivative element in the ideas which the formation was used to express. And only in those formations which had such weakness would it show itself by reducing them to a radical idea. But the extent to which it prevailed in Ethiopic compared with the Asiatic members of this family, and the extent to which the derived forms of the verb supplanted in the same way the simpler forms, show the reality of its operation. To this cause also is due the prevalence of the formation of causative or reflexive, which was facilitated by the reduction of the reflexive.

124. In the Ethiopic simple triliteral stem, the vocalisation of the third singular perfect is the same as in Arabic, except that in intransitive verbs the *i* and the *u* of the second radical<sup>2</sup> have both become *ē*, showing weakness of subjectivity.

The second form of the Arabic verb is in Ethiopic also, with the same significations, but generally the simple form is not retained along with it. And when the simple form is retained along with it there is scarcely any difference of meaning. The two last radicals of a root are sometimes repeated to express continuance or periodical

<sup>1</sup> Dillmann, pp. 107, 109, 111.

<sup>2</sup> Ibid. p. 116.

repetition, or the play of colours. Less frequently the last radical is doubled to express continuance or completeness, or a clinging state.<sup>1</sup>

The third form also is in Ethiopic, but it is not very frequent, and is partly replaced by its own reflexive form. And those verbs which have the third form either do not occur in the simple form or in the second, or if they do, the meaning does not differ.<sup>2</sup>

A fourth or causative form is formed in Ethiopic from each of the three preceding ones, in the same way as in Arabic from the simple stem. Often enough the simple stem is no longer in use along with its causative, but only the second form;<sup>3</sup> the simple stem having been weakened by being merged in the causative.

The causative of the second form is much more uncommon than that of the first or simple form. It rarely has the same meaning as the second form. Sometimes it exists along with the causative of the first form, and generally with a different meaning, though sometimes with the same.<sup>4</sup>

The causative of the third form is very rare, as that form itself is little used.<sup>5</sup>

There are reflexives of the first, second, and third forms, all, like the Arabic fifth and sixth, formed by prefixing *ta*. The reflexive formations are the only expression of the passive; there not being sufficient sense of the verb in its effect in the object to maintain the passive<sup>5</sup> (79, 102). The reference to the reflex object being direct, the verb may often govern an indirect object.<sup>6</sup> As the third form is used to express an action reaching to an object, its reflexive may either have the same meaning or may express reciprocity.<sup>7</sup>

Causatives are formed on the three reflexives by prefixing *las*; but as the first two reflexives differ less in meaning from the first and second forms than the third reflexive from the third form, the causatives of the first and second reflexives are much oftener replaced by the causatives of the first and second forms than the causative of the third reflexive by that of the third form. This last causative is consequently much more frequent than the others. It expresses causation of the reciprocal, even though the third reflexive be no longer in the language; or causation of gradual completeness or preparedness, though the third reflexive either does not occur or is found only in quite another signification.<sup>8</sup> For the derived form tends to put out the simpler form corresponding to it, by reducing it to a mere part of an idea.

Thus of the twelve verbal stems almost every one may be formed independently of the others from a verbal root or from a nominal stem. But it is not to be supposed that any root has the twelve stems. The richest is *gabra*, which has six in ordinary use. The more prolific roots have five, namely, a first, second, or third, a causative, a reflexive, a causative of reflexive, and a reciprocal. The most have only an active, a reflexive, and perhaps a reciprocal or a causative of

<sup>1</sup> Dillmann, p. 117-119.

<sup>2</sup> Ibid. pp. 119, 120.

<sup>3</sup> Ibid. p. 121.

<sup>4</sup> Ibid. p. 122.

<sup>5</sup> Ibid. p. 123.

<sup>6</sup> Ibid. p. 124.

<sup>7</sup> Ibid. p. 126.

<sup>8</sup> Ibid. p. 127-130.

reflexive. The first or third form may be in use, and yet the causatives and reflexives not be formed from it, but generally they are formed from the second if it be in use;<sup>1</sup> for owing to its strength the weakening which it undergoes in the derived forms is not sufficient to put it out, so that it can be in use along with its derived forms.

The pluriliteral stems have a causative form, a reflexive, a reciprocal or reflexive of third form, a causative of reflexive and causative of reciprocal, and a reflexive formed with *han-*, the other reflexives being formed with *ta-*. This last, however, is almost confined to reduplicated roots expressive of motion hither and thither, or of light or sound; and *han-* being less distinct as reflex object than *ta-*, the formation is almost a mere intransitive.

In the simple form, the second radical of the pluriliterals is always without a vowel; and there is no distinction of transitive and intransitive.

Most of the pluriliteral causatives are formed on stems of nouns.

In the reciprocal (reflexive of third form), the *ā*, which is the characteristic of the third form, follows the second radical of quadriliterals, the third radical of quinqueliterals.

The causatives of reflexive, and of reciprocal, of pluriliterals, are extremely rare. Dillmann knows only one example of the former, and two of the latter.

From some of the formations with *han-*, reflexives are formed by dropping *ha* and prefixing *ta-*; as if *ha* were causative, or as if the distinctness of *ta* as object gave a transitivity.<sup>2</sup>

125. The two tenses, the perfect and imperfect, are the same in signification and use in Ethiopic as in Arabic. But there is a slight difference in compound tenses formed with the help of the verb substantive *halawa*. The constructions in Arabic with the perfect or imperfect of the verb *kāna*, and the perfect or imperfect of other verbs (65) are used to define positions in time, that which in the past was present, future, or past, and that which in the future will be past. The Ethiopic constructions with *halawa* express subjective process going

on in the past or future, or being about to commence; as 3d pers. imp.  
yē

pl.  
tχaqual'ā 3d pl. perf.  
halaw · ā, they shall descend, they are = they shall be

descending; 3d pers. imp.  
yē · *mat'ē halawa*, he is about to come, perfect = realised present.

In the continuing future, the auxiliary in the perfect generally precedes, but may follow the principal verb in the imperfect, the verb being thought in the former arrangement with more subjective limitation than in the latter. In the continuing past or the immediate future, the auxiliary in the perfect precedes the verb in the imperfect, and for the continuing past *kāna* may be used as well as *halawa*.<sup>3</sup> This use of auxiliaries to express elements of subjective process shows how this has been reduced in the verb itself, as appears also in the

<sup>1</sup> Dillmann, pp. 130, 131.

<sup>2</sup> Ibid. p. 131-135.

<sup>3</sup> Ibid. pp. 138, 139.

reduction of the vocalisation. Subject to the condition that Arabic *i* and *u* are represented in Ethiopic by *ē*, the vocalisation of the Ethiopic verb follows that of the Arabic, except that the imperfect has dropped the vowel of the third radical at the end and taken *a* after the antepenultimate radical, and that some reflexives have in the perfect *ē* with the second radical.<sup>1</sup> The *a*, which is taken by the imperfect after the first radical of triliterals, and after the antepenultimate radical of pluriliterals, probably expresses the going on of what is not completed, and is an imperfect substitute for the indwelling subjectivity of *u* which has been lost (54).

The subjunctive and jussive moods agree in form with Arabic jussive, save so far as the person elements differ (51); and the imperative differs only in rejecting the prefix of the second person.<sup>1</sup>

The third person singular of the imperfect in the simple form has *yē*, in the causative *yā*.<sup>2</sup>

126. The nominal stem, like the verb, has as a general rule dropped the final vowel.<sup>3</sup>

(1.) The simplest nominal stem formed from the verbal root corresponds to Arabic *l* (57), and has a short accented vowel *a* or *ē* after the first radical, and no vowel after the second or third. Its meaning is the abstract of the verb, which, however, was often transferred to things or existences to designate them by their most striking attribute.<sup>4</sup>

The second formation of nominal stems is with an accented vowel after the second radical, either short or lengthened by the accent. These nouns are either formed from the imperfect, and correspond to infinitive nouns of the other Syro-Arabian languages; or they are formed from the perfect, and correspond to the participles and verbal adjectives of the other languages.<sup>5</sup>

(2.) Of the former kind, those which have *ē* after the second radical take the feminine ending *-at* or *-ā*, and signify the action or property, being rarely used as appellatives to denote things. When nouns of the first formation spring from the same root these signify the pure doing.<sup>6</sup> Those which have intransitive *a* after the second radical, sometimes have it long *ā*; and these are less verbal than when it is short, being substantives rather than infinitives, denoting the result of the being or doing rather than the being or doing itself, and generally appellatives<sup>7</sup> (57). Of the latter kind, the only formation which is usual represents the passive participle, the others are few; and as the vowels of the perfect are lengthened, there are here not only *ā*, but also *ī* and *ū* in the second syllable.

(3.) The formation with *ā* in the second syllable is scantily developed; the first vowel being *ē* in adjectives, which, however, are few, and tend to be used as substantives.

(4.) The formation with *ī* in the second syllable is the most frequent for pure adjectives, and they come from roots of intransitive meaning; their first vowel is *a*, to distinguish them from participles.

<sup>1</sup> Dillmann, p. 141-143.

<sup>4</sup> Ibid. p. 173.

<sup>2</sup> Ibid. pp. 143, 151.

<sup>5</sup> Ibid. p. 176.

<sup>7</sup> Ibid. p. 179.

<sup>3</sup> Ibid. p. 172.

<sup>6</sup> Ibid. p. 177.



(5.) The formation with  $\bar{u}$  in the second syllable,  $\check{e}$  in the first, is far the most frequent, and can be formed from most roots, even from nouns; its meaning being that of a passive participle or an adjective of state.<sup>1</sup>

(6.) The third formation of nominal stems is of those which have  $\bar{a}$  in the first syllable,  $\check{e}$  in the second, corresponding to the active participle, but formed from only a few roots and used only as adjectives or substantives;<sup>2</sup> and of those which have  $a$  in the first syllable and  $\bar{z}$  or very rarely  $\bar{u}$  in the second, this being the most usual form for verbal infinitives which are scarcely ever used as substantives.<sup>3</sup>

(7.) Besides the above formations with three radicals, there are nominal stems formed with doubling of the second radical, and with  $a$  in the first syllable,  $\bar{a}$  accented in the second; which are either adjectives denoting qualities of a more essential and permanent nature or properties of a higher degree, or are substantives denoting the habitual doer, the latter often subjoining  $\bar{z}$ .<sup>4</sup> There are also adjectives formed with repetition of the last two radicals, as  $t'ag'aw\bar{g}'\bar{u}$ , whitish; to denote colours and tastes with an expression of being like what is denoted by the root.<sup>5</sup>

(8.) Nominal stems corresponding to the second of the trilateral formations, are formed from the derived verbal stems;<sup>5</sup> but most of their participles or what serve for such are formed by elements prefixed or suffixed; the passive participle, however, being formed from some with  $\bar{u}$  after the second radical.<sup>6</sup>

The pluriliteral roots for the most part originate only substantives which are principally appellatives; and being so long, they seldom take a feminine ending except  $\bar{a}$ ; their two syllables having both  $\check{e}$ , or both  $a$ , or the last  $\bar{a}$  and the first  $a$  or  $\check{e}$ .<sup>7</sup>

(9.) The quadriliteral verbal stem with  $a$  in each syllable is used adjectively, and if it be more strongly distinguished as an adjective it takes  $a$  after the second radical, so as to be trisyllabic; or the last syllable takes  $\bar{a}$  and the first  $\check{e}$  or more frequently  $a$ ; but the most frequent form is that of the passive participle with  $\bar{u}$  in the last syllable and the shortest possible vowel in the preceding one.<sup>8</sup>

(10.) Nouns of the action are formed from pluriliteral roots by  $\bar{a}$  in the last syllable,  $a$  in the preceding ones.<sup>9</sup>

(11.) The relative prefix  $ma-$  is used to form participles from certain active derived verbal stems, used partly as adjectives and more frequently as personal appellatives; the last syllable having  $\check{e}$  before the last radical for the active participle,  $a$  for the passive;<sup>10</sup> they sometimes add the adjective ending  $\bar{z}$ , which makes them nouns of the doer.<sup>11</sup>

127. (1.) This prefix  $ma$ , taking up the first radical into a closed syllable, is used to denote that whereon the radical object of thought is manifested, the place, the instrument, the production, the doing; the

<sup>1</sup> Dillmann, p. 180-183.

<sup>4</sup> Ibid. p. 185.

<sup>7</sup> Ibid. p. 189.

<sup>10</sup> Ibid. p. 192.

<sup>2</sup> Ibid. pp. 183, 184.

<sup>5</sup> Ibid. p. 186.

<sup>8</sup> Ibid. p. 190.

<sup>11</sup> Ibid. p. 200.

<sup>3</sup> Ibid. p. 184.

<sup>6</sup> Ibid. p. 188.

<sup>9</sup> Ibid. p. 191.

noun of place having  $\bar{a}$  after penultimate radical, which shortens  $ma$  to  $m\bar{e}$ ; the other nouns having  $a$  or less frequently  $\bar{e}$ .<sup>1</sup>

The nominal stems which are formed by subjoined elements are mostly from other nouns, and they are generally qualifying words or abstracts. The ground of most of the suffixes is the Syro-Arabian adjective ending  $\bar{i}$ .<sup>2</sup>

(2.) This element  $\bar{i}$  forms nouns of the doer, from other nouns; but also many adjectives; and from the derived verbal stems, adjectives which serve for participles, and have  $\bar{a}$  accented with their penultimate radical,  $a$  with the others.<sup>3</sup>

(3.) The stronger ending  $\bar{a}'\bar{i}$  may be joined to any word without changing the vowels to form an adjective; but usually in prose the construction with a genitive is preferred.<sup>4</sup> The shorter form  $\bar{a}\bar{i}$  is in only a few words.<sup>5</sup>

(4.) The feminine ending subjoined to these adjectives forms their abstract substantive of quality; the endings thus formed are  $\bar{y}\bar{a}'$ ,  $\bar{i}'t$ ,  $\bar{u}'t$ ,  $\bar{e}'t$ ,  $\bar{e}'$ ,  $\bar{o}t$ ,  $\bar{o}$ ,  $\bar{a}t$ ;  $\bar{o}t$  and  $\bar{o}$  are much used for formation of the infinitive.<sup>6</sup>

(5.) There are also abstract endings  $\bar{a}'n$  and  $\bar{n}\bar{a}'$ ;  $\bar{a}n$  is used, as a rule, with nouns of the first simple formation;  $\bar{n}\bar{a}$  is more frequent.<sup>6</sup>

128. In consequence of the reduction of the sense of subjective process (125) in the Ethiopic verb there is not enough sense of the succession of the being or doing to maintain the participles as such (Def. 13); so that these are formed only from some verbs, and have in general quite lost a participial meaning, and become either adjectives or substantives of the doer. Hence it is that so many of them take the external ending  $\bar{i}$ ,<sup>7</sup> to connect them with the substance to which they belong, the root having so largely lost the sense of this by losing the succession of being or doing which belongs to it.

The Ethiopic, like the Arabic, uses for an infinitive a verbal noun; but it forms also a more verbal infinitive with  $\bar{i}'$  after the second radical,  $a$  after the first; which takes a personal possessive suffix to represent its subject, and is governed in the accusative case by the verb to which it supplies a supplementary verbal idea (92) like a gerund.<sup>8</sup>

The nominal infinitive in the simple form of the trilateral verb adds  $\bar{o}t$  to the verbal infinitive; and in the other forms of the trilateral verb, and in the quadrilateral, it subjoins  $\bar{o}t$  or  $\bar{o}$  to the subjunctive after having stripped it of the person elements with no change of the vowels except that in the reflexive forms, after the second radical  $a$  is changed to  $\bar{e}$ , and  $\bar{i}$  after the second radical is not permitted; with a possessive suffix the ending is  $\bar{o}t$ .<sup>9</sup> The nominal infinitive has less sense of the subjective process penetrating the verbal root, and the succession of the doing or being is thought rather as fixed in a substance which is naturally feminine, because the substantive object of thought (the infinitive) is an inherent, subor-

<sup>1</sup> Dillmann, pp. 194, 195.

<sup>4</sup> Ibid. p. 201.

<sup>7</sup> Ibid. p. 203.

<sup>2</sup> Ibid. p. 198.

<sup>5</sup> Ibid. p. 202-205.

<sup>8</sup> Ibid. pp. 209, 210.

<sup>3</sup> Ibid. p. 199.

<sup>6</sup> Ibid. pp. 205, 206.

<sup>9</sup> Ibid. pp. 212, 213.

dinate to that in which it inheres; thus perhaps we may understand the external ending  $\bar{o}t$ , consisting of  $\bar{o}$  joined to the feminine element  $t$ .

129. The feminine ending for abstract verbal nouns is  $-at$ , for concrete substantives it is  $-t$ .<sup>1</sup> Perhaps there is this difference, because in abstracting the verbal idea as a substantive the mind thinks it as an entire object (Def. 4), and instead of passing to the subject, dwells on the succession, which is expressed by  $a$ , as in English by  $-ing$ . When it is thus abstracted the mind passes to the objective thought of it as a subordinate thing which is expressed by the feminine substance  $t$ . But abstracts from the derived verbal stems have generally the ending  $\bar{a}$ ,<sup>2</sup> probably because the thought of them is so heavy as to weaken the sense of the substance by withdrawing from it the mental energy, and  $t$  is consequently given up, and  $a$  lengthened by absorbing it. Other abstracts also which have become appellatives of persons and things have lost sense of substance as an added element, and having absorbed it into their idea, they absorb  $t$  in their expression, and end in  $\bar{a}$ .<sup>2</sup>

On the other hand, concrete substantives take  $-t$  for their feminine ending,<sup>3</sup> having no intermediate element, because the mind can pass directly from the general idea of them to the thought of them as feminine. And adjectives and participles being by their nature combined with the substantive to which they belong (Def. 6), take its substance without a connective element, and form their feminine by subjoining  $t$ .<sup>4</sup> Some of them, however, are not so closely combined in one idea with the substantive, but are rather themselves thought in reference to it as intransitive states of it (58), and these tend to take up into their own idea a sense of gender which affects their vocalisation, for the feminine may be expressed by the reduced force of utterance when the organs are relaxed by a long open vowel. Such are the adjectives of the second formation (126), which have  $\bar{i}$  with their second radical, and which form their feminine by changing  $\bar{i}$  to  $\bar{e}$  or  $\bar{a}$ .<sup>4</sup>

The formation of a *nomen unitatis* from a *nomen generis* by the feminine ending (57. 14) is little carried out in Ethiopic, but seems to exist in the names of animals and plants with that ending.<sup>5</sup>

Many substantives are thought as feminine without having any feminine ending. Those which signify men are always masculine, and those which signify women are always feminine, whether they have a feminine ending or not. Some nouns may be applied indifferently to men or women, but most nouns when applied to women take a feminine ending. The female of animals is distinguished by the feminine ending only in those most frequently spoken of.

Any substantive of abstract meaning without a feminine ending may be used as feminine, and though it has a feminine ending it may be used as masculine. Nouns of multitude also and collectives may be used as feminine or not. Nouns of countries and cities are generally feminine. Those of parts of the body, instruments, dwell-

<sup>1</sup> Dillmann, p. 216.

<sup>2</sup> Ibid. p. 217.

<sup>3</sup> Ibid. p. 219.

<sup>4</sup> Ibid. p. 221.

<sup>5</sup> Ibid. p. 227.

ings, trees, are of either gender; natural objects and means of sustenance, masculine.

The distinction of gender is more impaired in Ethiopic than in any other Syro-Arabian language.

By far the most of nouns, whether they have a feminine ending or not, may be used as feminine or not. But the later manuscripts, as if from foreign influence, try to avoid the arbitrary variation of gender in the same sentence or section.<sup>1</sup>

130. The number of nouns is either singular or plural; there is no dual except a trace of it in the word *kelhē*, two.<sup>2</sup> Only collective nouns and universal appellatives, as gold, snow, honey, form no plural; yet many of these may be so applied as to be capable of a plural.<sup>3</sup>

There is also a plural of eminence, fulness, or totality.<sup>4</sup>

The formation of the plural is, as in Arabic, either outer or inner.

The former is *-ān*, masculine; *-āt*, feminine; *-ān* is annexed to the last radical; *-āt* often takes the place of *-at*, but generally is annexed to the stem whether it end in *-at* or not.

But even nouns, which have not the feminine ending in the singular, are apt to take *-āt* in the plural<sup>5</sup> on account of the natural weakness of the plural (59).

In fact, *-ān* is taken only by personal nouns, yet not by all of these, and by adjectives and participles, but these take also *-āt* for feminine.<sup>5</sup>

All proper names, whether of men or women, form the plural in *-āt*.

Nouns of male persons having an office, business, or situation, form the plural in *-āt*; and this plural is also the abstract of the employment.<sup>6</sup>

All nouns which have *ā* before the last radical form the outer plural; and most of those which end in a long vowel, some also of the simpler stems which end in a consonant, and a few of those which are formed with *ma-*.<sup>7</sup>

The inner plurals are of the following formations, besides remains of other formations still retained in Arabic:

Inner plural.	Singular.
1. <i>gēbar</i>	<i>gēbr</i> ; old abbreviated nouns, <i>hak</i> father, <i>hēxūē</i> brother, <i>hēd</i> hand, &c., which form this plural as of the form <i>gēbr</i> , having taken <i>v</i> for a third radical; many nouns ( <i>gēbr</i> ) denoting parts of the body.
2. { <i>ḥagbār</i> <i>ḥagbārēt</i> (very rare)	<i>gabār</i> , <i>gabr</i> , <i>gēbr</i> , oftener than first.
3. <i>ḥagbūr</i> (not much used)	many personal nouns of a masculine nature.
4. <i>ḥagbēr</i> (still less used than 3).	

<sup>1</sup> Dillmann, p. 224-226.

<sup>4</sup> Ibid. p. 229.

<sup>2</sup> Ibid. p. 226.

<sup>5</sup> Ibid. p. 230.

<sup>7</sup> Ibid. p. 234-236.

<sup>3</sup> Ibid. p. 228.

<sup>6</sup> Ibid. p. 233.

Inner plural.	Singular.
5. <i>ḡagbērēt</i> (this and 2 the most used)	<i>ḡēbr</i> seldom; usually from <i>ḡūbar</i> or <i>ḡābr</i> .
6. <i>gabart</i>	<i>gabārī</i> ; <i>gabīr</i> , 126. 4.
7. <i>ṭabādēn</i>	<i>ṭabdan</i> ; all stems with more than three consonants, or formed with external additions; several triliteral stems with long vowel after second or third radical, equivalent to another radical; some of these stems, mostly personal nouns, add <i>t</i> to the plural, dropping <i>t</i> if they have it in singular.

The feminine singular abstract ending (127. 4) is also used to express a collective idea.

Many nouns form two or three inner plurals without any difference of meaning. From these inner plurals other plurals can be formed by adding to them *-āt*, seldom *-ān*; and this formation is used more frequently in Ethiopic than in any other Syro-Arabian language. Some of the inner plurals thus treated express only a singular conception; others an aggregate of parts. Sometimes the double plural is used to denote multitude, or totality, or dignity; sometimes to express gender by the masculine or feminine plural ending.

This treatment of the inner plurals shows that they involve still less sense of the individuals in Ethiopic than in Arabic, and approach more nearly to the nature of singular collectives;<sup>1</sup> expressing this by additional vocalisation (59).

131. The only case ending retained generally by the noun is that of the accusative *-a*; but some few nouns have a vocative in *-ō*.<sup>2</sup>

Proper names when they form the accusative form it in *-ha*,<sup>3</sup> which is pronominal and arthritic (Def. 7), because proper names are so concrete and independent that they are less immersed than common nouns in the combinations of fact (60).

Common nouns form the accusative in *-a*, this being added to a final consonant, and blended with a final vowel, changing *ī* to *ē*, and being absorbed into *ē*, *ō*, and *ā*, without making any change in these.

If there be several accusatives, the ending is apt to be dropped with the latter ones; as also when the noun has the relative prefix *za-*, or when it has a pronominal suffix.<sup>4</sup>

The governor of a noun in the genitive relation takes *-a* to connect it in construction; before a pronominal suffix a noun takes *-ī*<sup>5</sup> (83, 84). The *-a* is taken by the noun in this construct state as by the accusative; but proper names are not capable of the formation. No word can intervene between the construct governor and the genitive.<sup>6</sup> The genitive is also expressed by prefixing to the noun the relative *za* to represent the governor; and if the governor be feminine, the prefix may be the feminine relative *ḥēnta*, and if plural, the plural relative *ḥēla*. The genitive with this prefix may either precede or

<sup>1</sup> Dillmann, p. 237-251.

<sup>4</sup> Ibid. pp. 255, 256.

<sup>2</sup> Ibid. p. 253.

<sup>5</sup> Ibid. p. 257.

<sup>3</sup> Ibid. p. 255.

<sup>6</sup> Ibid. p. 258.

follow the governing noun. This mode of expressing the genitive has quite prevailed over the use of the preposition *la* for that purpose.<sup>1</sup>

132. The demonstrative pronoun of the near is:

	masc.	fem.		masc.	fem.
Stem	<i>zē</i>	<i>zā</i>	} sing.	<i>hēllū</i>	<i>hēllā</i>
Accus.	<i>za</i>	<i>zā</i>		same. } pl.	

Its singular stem is generally attached as a prefix or suffix to the word to which it refers.

This demonstrative is strengthened by subjoining the demonstrative element *t* with different vowels of gender and case, so that the usual demonstrative of the near is:

	masc.	fem.		masc.	fem.
Stem	<i>zēntū</i>	<i>zātū</i>	} sing.	<i>hēllōntū</i>	<i>hēllāntū</i>
Accus.	<i>zanta</i>	<i>zāta</i>		<i>hēllōnta</i>	<i>hēllānta</i>

The demonstrative of the remote is:

	masc.	fem.		masc. and fem.
	<i>zēkū</i>	<i>hēntēkū</i>	} sing.	<i>hēlkū</i> , pl.
Accus.	<i>zēkua</i>	...		...

Also:

	masc.	fem.		masc. and fem.
	<i>zēkuētū</i> or <i>zēktū</i>	<i>hēntāktū</i>	} sing.	<i>hēlkuētū</i> or <i>hēlktū</i>
Accus.	<i>zēkuēta</i> or <i>zēkta</i>	<i>hēntākta</i>		<i>hēlkuēta</i> or <i>hēlktēta</i>

The pronoun of the third person when used adjectively in the sense of *αὐτός*; or that, is declined:

	masc.	fem.		masc.	fem.		masc.	fem.
Stem	<i>vēhētū</i>	<i>yēhētū</i>	} sing.	<i>hēmūntū</i>	<i>hēmāntū</i>	or:	<i>vēhētōmū</i>	<i>vēhētōn</i>
Accus.	<i>vēhēta</i>	<i>yēhēta</i>		no accus.			no accus.	
								} pl. 3

The relative pronoun is, in the singular, *za* masculine, *hānta* feminine, in plural *hella* masculine and feminine; the final *a* has relative significance; *za* is used for feminine, and for plural, when the antecedent is expressed in the relative sentence either by a noun or by a suffixed pronoun; *za* is almost always attached to another word, usually to the next word in the relative sentence which it introduces, sometimes but seldom suffixed, as it is to a preposition.<sup>4</sup>

The interrogative pronouns used substantively are, *manū*, who? accusative *mana*, whom? of both genders and numbers; *mēnt*, what? *mī*-, what? *manū* and *mēnt* are indefinite with the negative prefix *hē*, but then generally take *-hē* or *-nē*, which signifies also, and may at the same time prefix *va*-, and; thus *hēmanūhē*, nobody.<sup>5</sup> There is another interrogative *hayē*, what? used adjectively, and forming an accusative singular *haya*, and feminine plural *hayēt*.<sup>6</sup>

For the personal pronouns, separate and affixed, see table (51).

When a personal pronoun is emphatic, as object of a verb, it is expressed separately by means of a pronominal stem, *kīyyā*, to which it is attached as a possessive suffix (56); and if it be separated as a genitive, the possessive suffix is attached to the relative, which represents the governor, and agrees with it in gender and person, the

<sup>1</sup> Dillmann, p. 260.

<sup>2</sup> Ibid. p. 260-263.

<sup>3</sup> Ibid. pp. 266, 267.

<sup>4</sup> Ibid. pp. 263, 264.

<sup>5</sup> Ibid. pp. 264, 265.

<sup>6</sup> Ibid. p. 266.

relative *z*, *hənt*, *həl*, being joined to the suffix by *īha*, and the formation being preceded immediately by the governing noun in the construct state, as *bəhəsīt'a hənt-īha'ka*, *thy wife*; but if the governing noun has a suffix of its own, or govern a genitive, the possessive formation is independent, and may precede it; when used adjectively these possessives take an additional relative prefix, as *bəhəsīt za'hənt-īha'ka*.<sup>1</sup>

A demonstrative pronoun may be made emphatic by subjoining to it *rəhētū yəhētī*; and both demonstrative and personal pronouns may be emphasised by being followed by *kəma*, even. Self, when nominative, is expressed by *lala*, with the possessive suffixes joined to it by *ī*; self when not nominative is expressed by *rəhēs*, head, with the possessive suffixes;<sup>2</sup> *nəfəs*, soul, is less used (86).

The object suffixes of the verb may be indirect object of it. They are connected with it by *a*; but if the verb be in a person which ends in a vowel this may suppress the connective *a*. The four suffixes of the third person drop their *h* and then contract the concurrent vowels. The subjunctive drops *a* before the four suffixes of the second person, for the subjunctive has less sense of process than the indicative, and the second person in the plural attracts to itself the accent and in the singular leaves it with the verbal stem,<sup>3</sup> so that *a* being weak and not strengthened by the accent is dropped.

Ethiopic, like Arabic, can attach two object suffixes to the verb, a direct and an indirect, the first person preceding the second or third, and the second person preceding the third<sup>4</sup> (56).

A plural noun, whether of the outer or of the inner form, in taking the possessive suffixes inserts before them the connective vowel *ī* (84), which may be changed to *ē* before *-ya* and *-lī*; *-ī* always has the accent except when the suffix itself has it, viz., the second and third plural. The suffixed noun has no accusative ending.<sup>5</sup>

Singular nouns ending in *ā*, *ē*, or *ō*, annex the suffixes immediately, as also do singular nominatives in *ī*; but these preserve the *a* of the accusative before the second person. If a singular noun end in a consonant and be in the accusative case it has no connective vowel, this being overpowered by the *a* of the accusative, except that before the suffix *-ya* the connective *ē* overpowers the accusative *a*.

In the nominative case these stems take *č*, which before the first person only is accented, and before the third is absorbed by the vowel of the suffix, *h* having been dropped.<sup>6</sup>

The short old nouns *hab* father, *haχuē* brother, *χam* brother-in-law, *haf* mouth, have before the suffixes *ū* in the nominative, *ā* in the accusative.<sup>7</sup>

The possessive suffixes are used with an adjective when it needs to be connected with what it qualifies, as *guēya g'ērāq · ū*, he fled naked; empty 1st sing. sent away thou me *g'ērāq · ya hamfanav · ka'ni*, thou hadst sent me away empty.<sup>8</sup>

<sup>1</sup> Dillmann, pp. 270, 271.<sup>2</sup> Ibid. p. 272.<sup>3</sup> Ibid. pp. 273, 274.<sup>4</sup> Ibid. p. 277.<sup>5</sup> Ibid. p. 278.<sup>6</sup> Ibid. pp. 279, 280.<sup>7</sup> Ibid. p. 281.<sup>8</sup> Ibid. pp. 283, 377.

‡ The words *kuēl kuēlat*, whole, and *bāxfīt*, lone, always have a possessive suffix.<sup>1</sup>

133. The cardinal numbers for 3 to 10 are originally substantives. They take the feminine ending with masculine nouns, as in the other Syro-Arabian languages. But they are generally used, not as construct governors of a genitive, but in apposition. The Ethiopic numerals *ḥaxad* one, and *kēlē* two, agree in gender with their noun, *ḥaxadū* masculine, *ḥaxatī* feminine, and in the accusative *ḥaxada* masculine, *ḥaxata* feminine; *kēlētū* masculine, *kēlētī* feminine, and in the accusative *kēlēta* masculine and feminine; *-ū*, *-tū*, *-tī*, *-ta* being pronominal; *kēlē* means a pair. The numerals 3 to 10 with a masculine noun take *-tū*, accusative *-ta*, *t* being feminine of numeral, *ū* representing the masculine noun. With a feminine noun, these numerals remain in their ground form or shorten their vowels, and in the former case 6, 7, 9, 10 take *-ū*, which is retained in the accusative and before the suffixes. Now, *samānū*, 8, has the Arabic dual ending, and *ū* is probably the plural ending (51) appropriate to the higher units. The multiples of 10 have dropped the final consonant of the plural ending. The ordinals have the form of an active participle, and the multiplicatives of a passive participle.<sup>2</sup>

134. The only true simple prepositions are *ba* in, *la* to, and *ḥēmēn* or *ḥēm* from; if indeed the last be so. "Except the pair of prepositions which express the cases of the nouns, and which are very frequently used, and extraordinarily shortened, most of the prepositions are derived from nouns and still retained in their original form." "Every preposition governs like a noun in the construct state, and therefore takes *-a*." "Most of the words used as prepositions are not used otherwise."<sup>3</sup>

The simplest conjunctions are *ra-* and, *ḥar* or, *-hi -ni* also, *-sa* but, *ḥalā* but, *-kē* so that.

The prepositions as being words in the construct state may govern a sentence, and they may thus become conjunctions. Many conjunctions have this origin, but most have come from the relative pronoun or from a demonstrative used as relative.

Some conjunctions are immersed in the sentence which they introduce, others more loosely precede it.<sup>4</sup>

The lighter particles of relation are in Ethiopic suffixed to other words, more frequently than in the other Syro-Arabian languages. They do not in general cause any change in the utterance or accent of the word to which they are subjoined. Almost always *ḥanka* so, *ḥangā āga*, *bāxtu* only, are subjoined, often also *dāḥēmū* much more, and always the following: *kama* as, *ḥeska* till that, *hī* also, *nī* for his, &c., part seinerseits, *kē* thus, *ma* when, if, *sa* but, and others.<sup>5</sup>

Ethiopic has formed a rich supply of words of relation: <sup>6</sup> but they seem to be in a great degree of a nominal nature.

135. There is no article in Ethiopic. But as in the Syro-Arabian languages, a genitive defines its governor (69); so a possessive suffix of the third person, when it refers to a substantive object identical

<sup>1</sup> Dillmann, pp. 285, 286.

<sup>2</sup> Ibid. p. 288-293.

<sup>3</sup> Ibid. pp. 305, 306.

<sup>4</sup> Ibid. p. 322-325.

<sup>5</sup> Ibid. p. 330.

<sup>6</sup> Ibid. p. 393.



with that which it affects as suffix, serves to define the latter like a definite article. Thus:

dream 1st sing. perf. dream accus. and as this dream its  
(1.) *χalam · kũ* *χēlm · a ra · kama · z χēlm · ũ*, I dreamed a dream and such was the dream.<sup>1</sup>

The genitive and its governor do not always coalesce as readily in Ethiopic as in Arabic and Hebrew, and when the substantives are thought with definiteness, the genitive may need to be connected with its governor by means of a possessive suffix to the latter to represent it in connection.

The object of a verb also, if it be emphasised as object, either to distinguish it as such or to connect it as such because of its being partially detached by connection with a demonstrative or a genitive, may need to be represented with the verb by an object suffix, to express the sense of connection.

When a governed word is thus represented by a suffix, it has the preposition *la* prefixed to itself. Thus:

beginning 3d sing. fem. wisdom  
(2.) *Qadām · ī · hū* *la · thak*, the beginning of wisdom.

and called 3d sing. obj. God light day  
(3.) *ʾA · samay · ũ* *hēg·zī·hab·χər la · brēhān gēlata*, and God called the light day.

see 1st pl. perf. him Lord our  
(4.) *Rēhī · nū · hū* *la·hēg·zī·enū*, we have seen our Lord; the first *na* lengthened by *h*.

If there be more than one governed word the suffix may be such as will represent all or only the first.<sup>2</sup>

136. The accusative governed by a verb may define the latter adverbially (66); and its own verbal noun in the accusative may be used with a verb as in 66.

A verb may be qualified adverbially by juxtaposition with another verb in the same tense, mood, number, and person<sup>3</sup> (87), or by being governed in the nominal infinitive by another verb<sup>3</sup> (87); or it may be defined by a verbal infinitive governed by it<sup>4</sup> (92), or by an imperfect in juxtaposition with it<sup>5</sup> (74, Ex. 6). A verb may govern its own nominal infinitive and express thereby either continuance or intensity (66, 92), the infinitive generally preceding, but in the former use sometimes following,<sup>6</sup> or it may govern the nominal infinitive of another verb constructed with its own object, as in 67.<sup>6</sup>

The subjunctive is used as in Arabic<sup>7</sup> (55).

137. A noun in the construct state is not thought in Ethiopic in such close connection with the genitive as in Arabic or Hebrew. It is therefore not abbreviated, but preserved entire, and takes the relative element *-a* to connect it with the genitive; and thus constructed, it may govern an entire sentence in place of a genitive.<sup>8</sup> Yet if it is to be affected with a possessive suffix,<sup>8</sup> this must be attached to the genitive, as nothing can intervene between the construct noun and the genitive (88); and if it is to be expressed as plural, the plural

<sup>1</sup> Dillmann, p. 334.

<sup>2</sup> Ibid. p. 335.

<sup>3</sup> Ibid. p. 352.

<sup>4</sup> Ibid. p. 353.

<sup>5</sup> Ibid. p. 354.

<sup>6</sup> Ibid. p. 355.

<sup>7</sup> Ibid. pp. 358, 359.

<sup>8</sup> Ibid. p. 363.

element is sometimes attached to the construct noun, and sometimes to the genitive<sup>1</sup> (88).

The genitive relation can be expressed by prefixing to the genitive the relative pronoun *za*, *'enta*, *'ella*, to represent the governing noun. This construction is used when the governing noun is a proper noun, or when it is defined by other words, or already governs another genitive, or when the genitive is a demonstrative or interrogative pronoun.<sup>2</sup>

138. Every plural substantive, of whatever form, can be connected with a plural adjective of the same gender as belongs to the substantive in the singular, or with a singular adjective which is then for the most part masculine (*i.e.*, without an element of gender), but may be feminine; singular substantives with a collective meaning may have a plural adjective in the gender which belongs to the individual substantive object. Adjectives which have an inner plural are apt to use it when the substantive is an inner plural.<sup>3</sup>

When a noun has a cardinal number connected with it, it is generally singular, but may be plural.<sup>4</sup>

The pronoun of the third person is sometimes used to connect the subject as such with the predicate even when the subject is first or second person (70, 92). It has the gender and number of the subject. The verbs *halava* and *kāna* are both used in a sense more concrete than the copula, the former to be present, the latter to come to pass.<sup>5</sup> The verb to have is expressed by a preposition governing the possessor (*sum* for *habeo*)<sup>6</sup> (74. 9).

The agreement of the verb or predicate with the subject is as variable as that of the qualifying adjective with the substantive<sup>7</sup> (96).

139. The arrangement of the words is much freer than in the other Syro-Arabian languages, almost as free as in Greek.<sup>8</sup> The genitive, which is formed with a relative prefix, is as little confined in its position as any Indo-European genitive.<sup>9</sup> And the adjective, though tending to follow its substantive, has similar freedom of position, especially if it has a possessive suffix to represent the substantive.<sup>10</sup>

The normal order of the sentence is verb, subject, object; but any member of the sentence may get precedence from emphasis, and is attracted by members of the sentence or by relative clauses which define it.<sup>11</sup>

140. Relative sentences which, without using a relative pronoun, refer to a word in the principal sentence, are rarer in Ethiopic than in the other Syro-Arabian languages.<sup>12</sup>

The relative pronoun may involve a demonstrative in its meaning (he who), and it then distinguishes gender and number, its case being that which the demonstrative should have.<sup>13</sup>

<sup>1</sup> Dillmann, p. 364.

<sup>4</sup> Ibid. p. 381.

<sup>7</sup> Ibid. p. 391.

<sup>10</sup> Ibid. pp. 375, 377.

<sup>12</sup> Ibid. p. 366-368.

<sup>5</sup> Ibid. pp. 389, 390.

<sup>8</sup> Ibid. p. 393.

<sup>11</sup> Ibid. p. 393-397.

<sup>13</sup> Ibid. p. 413.

<sup>3</sup> Ibid. p. 374.

<sup>6</sup> Ibid. p. 343.

<sup>9</sup> Ibid. p. 366.

<sup>12</sup> Ibid. p. 412.

Ethiopic likes to bring the antecedent or an adjective which agrees with it into the relative sentence (as in classical attraction).<sup>1</sup>

Usually the relative pronoun, though it takes the gender and number of the antecedent, does not stand in the relation which belongs to the antecedent in the relative sentence unless this be subject, but the antecedent is represented in that relation by a demonstrative element. The relative pronoun can also be constructed as in Indo-European in the proper relation, and may even be followed by a preposition like *quorum*.<sup>2</sup>

The relative construction is much used in Ethiopic. It supplies participles and adjectives, and connects adjectives with substantives, and subsidiary defining elements with a noun.<sup>3</sup>

## AMHARIC.

**141.** The Amharic language is that Abyssinian dialect which is spoken by the greater part of the population of Abyssinia. It prevails in all the provinces of Abyssinia lying between the Taccaze and the Abay or Abyssinian Nile, and in the kingdom of Shoa. Its nearest cognate is the Tigré language; and both Amharic and Tigré are modifications of the ancient Ethiopic. But the Tigré has preserved a greater similarity to the Ethiopic, and received much less mixture from other languages than the Amharic.<sup>4</sup>

The Amharic consonants have a still more African character than the Ethiopic. From *k, t, d, z, n*, have arisen softer consonants uttered with the tongue in a more relaxed condition, and which co-exist in the language with those consonants, viz., *ḳ, ṭ, ḍ, ẓ, ṇ*. The old *t*, which was uttered strongly with pressure of breath from the chest, has come to be uttered with mere strength of pressure of the tongue, and an interval between it and the breath of the following vowel (120). In the same manner *ṭ, ṭ̣, p*, and *q* are uttered, there being also a *ṭ̣* uttered with breath, and followed without interval by the vowel; and, as in Ethiopic, *q, x, k*, and *g* may take *w* before the following vowel. There are, as in Hebrew, two letters uttered *s*, and an *ś* besides; the *vau* is *w* in Amharic; *h, x, and ž* are pronounced alike, and *g̣* like *ʾ*, but in Tigré these consonants retain their true utterance.<sup>5</sup>

The written vowels *i, u*, and *o*, which are long in Ethiopic, may be long or short in Amharic; *e* is sometimes sounded, sometimes not.<sup>6</sup>

The African tendency to utter consonants without pressure of breath from the chest led to the insertion of *w* after a long vowel to close the jet of breath<sup>7</sup> (I. 57).

**142.** Nouns with two radicals and ending in *u* correspond to Ethiopic verbal adjectives (126. 5); those which end in *i* generally signify an agent.<sup>8</sup>

Nouns of the form *faj'āli* are active substantives or adjectives;

<sup>1</sup> Dillmann, p. 414.

<sup>2</sup> Ibid. pp. 415, 416.

<sup>3</sup> Ibid. pp. 417, 418.

<sup>4</sup> Isenberg's Amharic Grammar, p. 1.

<sup>5</sup> Ibid. p. 2-8.

<sup>6</sup> Ibid. pp. 9, 10.

<sup>7</sup> Ibid. p. 16.

<sup>8</sup> Ibid. p. 24.

those of the form *fēj'ālī* are passive; *fēj'ālē*, abstract nouns of quality; *fēj'ēl*, essence, quality, action, or concrete substance; *faj'ēl*, quality, concrete substantive, adjective; *fēj'ul*, passive participial adjective.<sup>1</sup>

Compound nouns are formed from the Ethiopic *status constructus*, and also from Amharic words, combining noun with noun, or with any other part of speech.<sup>2</sup>

Adjective stems of intenser meaning are formed by repetition of any of the radicals.

The prefix *ma-* is used for infinitives, and retained in nouns derived therefrom.

The addition of *-ām* to substantive stems forms adjectives and substantives of fulness, intenseness, &c.

Substantives are also formed by *-mā*.

By *-na*, *-ān*, are formed substantives of quality from verbs.

By *-nā*, *-nat*, are formed abstract substantives from adjectives, substantives, and particles.

By *-nā* substantives of office, habit, or quality, are formed from adjectives and substantives.

By *-ānī* similar substantives are formed, and also Gentile nouns.

By *-yā* joined to infinitives or simple roots are formed nouns of agency, instrument, locality, object, &c.<sup>3</sup>

There is no adjectival expression of degrees of comparison.<sup>4</sup>

143. Gender is either masculine or feminine. The names of females and of female ranks and offices are feminine, also those of the moon, the earth, countries, towns, &c., plants, collectives, and several abstracts; the sun and the stars are masculine. Feminines are formed by *-t*, *-tā*, *-tu*, also by *-nā* and *-nat*.<sup>5</sup>

The plural ending is *-ot*; there is no dual. Sometimes the Ethiopic ending *-ān* is used, and *-āt* for feminine; derivatives in *-ān* and some others make plural in *-āt*.<sup>6</sup>

An accusative case is formed by adding *-n*, a genitive by prefixing *ya-*, which is relative pronoun. The genitive is also expressed by the *status constructus*, the governing noun adding *a* to a final consonant, and giving up its accent so as to compound with the genitive.<sup>7</sup>

144. For the personal pronouns and affixes see table (51).

The demonstrative of the near is *yēh* singular, *hēlzih* or *hēnzih* plural.

That of the remote is *yā* singular, *hēlziyā* plural.

The interrogatives are *mān* singular, *hēlmān* plural, who? which? what sort of? *mēn*, what? *yat*, what? *mēndēr*, what?

The nouns *bālahēt*, *rās*, and *nafēs* are used for self.<sup>8</sup>

145. The verb has nine derived forms corresponding to those of Ethiopic and Arabic, besides other variations of stems with repetition of radicals.<sup>9</sup> The Arabic forms which it has are 1, 2, 3, 4, 5, 6, 10, and 11. The only passive is the reflexive.

For the person elements, suffixed and prefixed, see table (51).

The imperfect in Amharic is what Isenberg calls the contingent,

<sup>1</sup> Isenberg, pp. 26, 27.

<sup>2</sup> Ibid. pp. 29, 30.

<sup>3</sup> Ibid. p. 32-35.

<sup>4</sup> Ibid. p. 35.

<sup>5</sup> Ibid. pp. 36, 37.

<sup>6</sup> Ibid. pp. 38, 39.

<sup>7</sup> Ibid. p. 40, 41.

<sup>8</sup> Ibid. p. 43-50.

<sup>9</sup> Ibid. p. 53-55.

having become in this language an abstract verbal conception, in which the subjective process is so reduced that it often needs to be supplemented by external verbal elements. Its vocalisation, as that of the Ethiopic imperfect, is *a*, *ě*, *ě*. That of the jussive, which in Ethiopic is *ě*, *ě*, *ě* for transitives, and *ě*, *a*, *ě* for intransitives, is in Amharic *ě*, *a*, *ě*; and, as in Ethiopic, the imperative stem is the same as the jussive. But several verbs in Amharic have no jussive, and use the imperfect for it. The infinitive (*a*, *ě*, *ě*), with possessive suffixes of the subject, is used as a gerund, as in Ethiopic (128); it takes *a* before the suffixes, which unites with *u* in *o*, and is dropped before other vowels; and it changes third singular feminine from *-awā* to *-ā*, third plural from *-āf'awē* to *-awē*, first plural from *-āf'en* to *-an*, and second singular reverential from *-awo* to *-awē*.

A more nominal infinitive is formed by the prefix *ma-*, and the vocalisation *ě*, *a*, *ě*, or *ā*, *a*, *ě*.

There is an active participle (*a*, *ā*, *ī*) which may govern its object either as a genitive or an accusative, and a passive participle (*ě*, *ā*, *ī*). But the more verbal participles are supplied, as in Ethiopic, by the relative prefixed to the verb in its various persons, *ya-* to the perfect, and *yamē* to the imperfect. These formations may be declined not only by taking prepositions, but even by taking the accusative ending *-n*.<sup>1</sup> Whereas a noun ending in a consonant takes *u* before this *-n*, probably to represent the substance, a relative participle ending in a consonant takes *a* before *n* to express the life of the person, and this is closed euphonicly by *w* before *-ēn*. If the relative participle ends in *u* this belongs to the person, and is to be distinguished from the substance; so *t* is inserted before *-ēn* to express the substance.<sup>2</sup>

The passive reflexive forms drop *t* after a personal prefix of the subject, the passive or intransitive nature showing itself by *u* with second radical.<sup>3</sup>

The Amharic language has developed greatly with the auxiliary verbs *hala* and *nabara*, the Ethiopic constructions with the imperfect and verbal infinitive of another verb (125, 136). The verb, *hala*, is translated is (Ethiopic, *halawa* vorhanden ist), *nabara*, was; *nabara* remains distinct as an auxiliary verb; but *hala* coalesces into one word with the imperfect and suffixed infinitive of the principal verb; *hala* and *nabara* are both used only in the perfect, and they follow the verb with which they are used.<sup>4</sup>

The simple perfect of the verb is used as in the Syro-Arabian languages generally.<sup>5</sup>

The simple imperfect has so lost sense of subjective process that it is used only when governed by a conjunction or turned into a participle by *yam-* prefixed to it.<sup>6</sup> To state a fact it needs the help of *hala*; and it is to be observed that in the third singular masculine, *hala* drops the final *a*, as if its subjective process were in some degree taken up by the principal verb.<sup>7</sup> When *hala* is subjoined to the suffixed infinitive it is reduced to *hal*, not only in the third singular

<sup>1</sup> Isenberg, p. 65-73.<sup>2</sup> Ibid. p. 169.<sup>3</sup> Ibid. p. 79.<sup>4</sup> Ibid. pp. 66, 67, 70.<sup>5</sup> Ibid. p. 174.<sup>6</sup> Ibid. p. 67.<sup>7</sup> Ibid. p. 66.

masculine, but in all the persons except the first singular and the third singular feminine,<sup>1</sup> perhaps because these two have weaker suffixes than the others with the infinitive, and therefore have more need of expression with *hala*.

When the object suffixes are taken by these formations they are inserted before *hala*.<sup>2</sup>

This verb *hala*, combined with the imperfect of a verbal root *hon*, is used as an auxiliary verb, which, constructed with the suffixed infinitive of a principal verb, expresses a potential.<sup>3</sup>

In these formations appears the African tendency to separate the process of being or doing from the stem of the verb; and the same is seen in the facility of forming verbs by subjoining to adverbs *hala*, to say; or *hadaraga*, or *hasana*, to make<sup>4</sup> (I. 11, 17, 19, 20, 28, 33, 37, 50, 53, 69).

146. The combination also in a compound of the construct noun with the genitive is a departure from the singleness of Syro-Arabian speech; and the development of a copula *n* used with object suffixes as a separate word,<sup>5</sup> is a distinct approach to the fragmentariness of African speech. The nature of this element is most obscure, for the personal suffixes which represent the subject express the subject as object, as if being were an operation of the subject on himself. This difficulty does not occur with *na* or *ni* in Vei (I. 37), nor with *no* in Woloff (I. 28), nor with *ni* in Oti, in which *n* seems to be pronominal referring to the predicate, and *i* to connect this with the subject (I. 53). To make the predicate in Amharic the true subject of *n*, supposed to affect the subject as its object, would be contrary to two habits of the language, that of using a suffix with the verb to correspond with its subject as such, and that of using with the object an

accusative ending. Thus, in the sentence, *mädär safi n · ät*, the earth is spacious;<sup>6</sup> *-ät* corresponds to *meder*, which is a feminine noun, and if *safi* taken substantively were subject it should be represented by a subject suffix with the verb, and if *mädär* were the object it should have the accusative ending; *n* cannot be regarded as a preposition, for the prepositions take possessive suffixes (see II. 97, 102, 107). The contraction of idea of the verb is shown in the large number of biliteral verbal stems.

147. There are about six pure prepositions, and rather more conjunctions.<sup>7</sup>

148. The order of the sentence is subject, predicate, copula; the adjective precedes the noun, and the governed word the governing;<sup>8</sup> suffixes and prepositions are no exception, as they are not words, but inseparable parts of words.

The adjective often agrees with its substantive in gender and number, often does not; but the adjective participles formed with relative prefixed agree in gender and number; adjectives are oftener singular than plural, and masculine than feminine.<sup>9</sup>

<sup>1</sup> Isenberg, p. 71.

<sup>2</sup> Ibid. p. 142.

<sup>3</sup> Ibid. p. 72.

<sup>4</sup> Ibid. p. 148.

<sup>5</sup> Ibid. p. 65.

<sup>6</sup> Ibid. p. 161.

<sup>7</sup> Ibid. pp. 154, 158.

<sup>8</sup> Ibid. pp. 162, 178.

<sup>9</sup> Ibid. pp. 163, 165.

Nouns thought abstractly, and several denoting parts of the body or faculties of the soul, are seldom used in the plural.<sup>1</sup>

When an accusative governs a genitive, the genitive precedes and takes the accusative ending instead of the governor.<sup>2</sup> It is characteristic of Amharic to think a relation in connection, not with the substantive itself, but with the substantive determined by its accompanying words.

When a genitive has several adjectives qualifying it, the *ya-* of the genitive is prefixed to each adjective, and may or may not be prefixed also to the substantive.<sup>3</sup>

When an accusative is qualified by an adjective, the *-n* is generally not affixed to both, but sometimes to one and sometimes to the other; when by several adjectives, each of them, and not the noun, has *-n*; when it is a relative participle that agrees with the noun, the participle has the *-n*.<sup>4</sup>

149. Example: *Barxawäryät zaman ba · bēt · a Krēstiyān hēndēh* which was 3d sing. fem. union fem. was 3d fem. in her all 3d pl. poss. one body  
*y · ala · t hāwēnat nabara · tē · ba · t hul · af · awē hāwē sēqā*  
one fem. soul and so that were they far Christian pl. and all 3d sing. poss.  
*hāwē it nāfšē m hēski · hon · ū · dēras ; Krēstiyānātē m hul · n*  
in Christ wholly neg. reflex. separate 3d pl. neg. all 3d pl. poss. rel. Adam child  
*ba · Krēstos kato hāl · t · alay · ū · m ; hul · af · awē ya · ḥadam tēd ·*  
pl. as were 3d pl. in body all 3d pl. poss. and to self 3d pl. poss. without  
*af · hēnda nabar · ū barseqā hul · af · awē · m larās · af · awē yāla*  
Christ rel. be lost 3d pl. sinner pl. as were 3d pl. so also by  
*Krēstos ya · taj · ū ḫātīḫān hēnla nabar · ū ; hēntihum ba ·*  
faith all 3d pl. poss. in one Christ be safe they all 3d pl. poss. and in  
*hāyēmānot hul · af · awē bāndē Krēstos dan · ū hul · af · awē m b ·*  
one calling pass. reflex. call 3d pl. in one blood and be just 3d pl. in one  
*āndē mat · rāt ta · t · ar · ū bāndē damē m t · adak · ū bāndē*  
Spirit and be pure 3d pl. reflex. sanctify 3d pl. and Peter and to believers  
*manfāsem nat · n ta · qadas · ū · m ; Pētrosem la · miyāmen*  
all 3d pl. poss. said ye rel. kingdom rel. priesthood people copula  
*hul · ū hāla, hēlant ya · mangestēnā ya · kēhen · at wagan n ·*  
3d pl. obj. rel. reflex. elect 3d sing. fem. and rel. reflex. sanctify 3d sing. fem. and  
*af · ehū ya · ta · maraf · af · e · m ya · ta · qadas · af · e · m*  
generation 2d pers. manifest pl. that from darkness unto marvellous his unto  
*tēwēdē tē · galt · u zand ka · t · aluma wada miyāsdanēq · awē wada*  
light his rel. call 2d pl. obj. accens. work

*berhān · u ya · t · ar · af · ehū · n sera.* In the time of the Apostles there was such an union in the Church that they were all one body and one soul. All Christians were quite unseparated in Christ. As all of them were Adam's children after the flesh, and as in themselves and without Christ they were lost sinners, so also by faith they were saved in one Christ. They were all called with one calling, justified by one blood, and purified and sanctified by one spirit. Peter also said to all believers, Ye are a royal, priestly people, and a chosen and sanctified generation, that ye should show forth the works of Him who hath called you out of darkness unto His marvellous light; <sup>5</sup> *ba* governs *ya · xawäryät zaman* (147); *ya* is elided after *bu*; <sup>6</sup> *xawäri* is an active substantive (142); *bēta* is

<sup>1</sup> Isenberg, p. 166.<sup>2</sup> Ibid. p. 167.<sup>3</sup> Ibid. p. 168.<sup>4</sup> Ibid. p. 169.<sup>5</sup> Ibid. p. 14-16.<sup>6</sup> Ibid. p. 18.

the construct state of *bēt* (142); *krestiyān* seems to be the word Christian; *hendēh yalat'*, what was so, expresses such; *-nat* is formative of abstract substantives, *handē*, one; *handēnat*, oneness, union (142);<sup>1</sup> the tendency to subjoin the lighter conjunctions as enclitics to the first object which they affect shows that the relation is so weakly thought that it needs adaptation to its object to give it vividness; the simple prepositions are prefixed, but those which are compounded of a preposition and a noun insert between their two parts the object which they govern, for it is, in truth, dependent as a genitive on the second part, and should therefore precede the latter. Thus *heski deras* means to the length;<sup>2</sup> *hon* seems to correspond to Hebrew *kūn stetit*, Arabie and Ethiopie *kūna* extitit fuit. The verb may be negated by the negative *hal* prefixed and the negative *m* suffixed;<sup>3</sup> *hēnda* precedes the verb which it affects; *hāyēmānot* seems to be a compound word; the verb *hamana* means he believed,<sup>4</sup> and from this root in Ethiopie comes the nominal infinitive *hamīnōt*, faith;<sup>5</sup> *mat' rāt* is a verbal noun from *t'ara*; *yāmēn* is the third singular imperfect of *hamana*; from this the relative participle is formed by prefixing *yamē* (145), which becomes *yamī* before the *η*, so that *yamīyāmēn* is, he who believes;<sup>6</sup> and as *ya* is dropped after the preposition, *lamīyāmēn* is, to him who believes; *maugestēnā* seems to be an abstract noun formed by *ma-nā* from a root akin to Hebrew *nēgēd* ante, *nāqūd* princeps; *kehenat* is the abstract of the noun for priest, corresponding to Hebrew *kōhēn*, Ethiopie *kūhan*; for *nūt'ehu* see 146; *teweled* is concrete nominal essence (142) of *tawalada*, the passive reflexive of *walwla* genuit, *tegaltu* second plural imperfect of *galata*; *hasdanaga* is causative of *danaqa*, which doubtless means he wondered; of this the third singular imperfect *yāsdanēq*, and the relative participle of this would be *yamīyāsdanēq*, which causes to wonder; this drops the *ya* after *wada*, and takes third singular suffix *awē*; *ya'tarūt'ehu* is, he who hath called you; it seems not to take a second *ya-* to put it in the genitive, but lets this be expressed by its position; it takes the accusative ending from its governor (148).

### TAMACHEK.

150. The Berber dialects may be studied as an appendix to the Syro-Arabian languages, exhibiting as they do throughout their structure traces of affinity to those languages, but subject to African influences which have obscured the Syro-Arabian features. Of these dialects that one will be described here which, being most remote from external influence, may be supposed to have preserved the native structure of the language in its greatest purity. Such is the Tamachek<sup>7</sup> spoken by the Tuariks in the Sahara from the south of Tripoli, Tunis, and Algiers to the Niger, and to the kingdoms of Haussa and Bornu, and from the longitude of Timbuctu and the oasis of Tuat on the west to Fezzan and the country of the Tibbus on the east.<sup>8</sup> In this great region, which not only has its wells and oases, but is said

<sup>1</sup> Isenberg, p. 34.

<sup>2</sup> Ibid. pp. 156, 157.

<sup>3</sup> Ibid. p. 152.

<sup>4</sup> Ibid. p. 55.

<sup>5</sup> Dillmann, p. 212.

<sup>6</sup> Isenberg, p. 94.

<sup>7</sup> Hanoteau, Gram. Tamachek, pp. xxvii. xxviii.

<sup>8</sup> Ibid. p. viii.



also to have water almost everywhere not far beneath the surface, and in rainy years to be covered with herbage;<sup>1</sup> the Tuariks live as nomads,<sup>2</sup> with their camels, asses, and goats.<sup>3</sup>

151. Tamachek has *h, q, ẖ, ẓ, k, g, ʒ, y, t, ḏ, s, z, ʔ, t, d, s, z, z, r, l, n, b, f, w, m, ā, i, u, ī, ā, e*; *g* and *z* are weak utterances of *q* and *z*.<sup>4</sup>

The letters are very liable to euphonic change; the spirants especially are imperfectly distinguished from each other;<sup>5</sup> *e* is often sounded like French *eu*, especially before the last letter of a word; and the vowels are often changed for one another, being subordinate to the consonants; formative consonants take vowels when required for facility of utterance.<sup>6</sup>

152. Nouns have two genders, the masculine and the feminine; two numbers, the singular and the plural.

In general the singular of masculine nouns begins with a vowel, *a, e, i*, or *u*; the plural of masculine nouns begins with *i*, but *u* or *e*, when initial of singular, is retained in plural; feminine nouns both singular and plural begin with *t*.

Exceptions to these rules are not numerous. Yet there are some masculine nouns, as well singular as plural, which begin with a consonant, some masculine plurals begin with *a*, and some feminine nouns singular or plural do not begin with *t*.<sup>7</sup>

In forming a feminine singular noun from a masculine, *t* is usually put before the initial vowel, and also at the end; but many feminines have not the final *t*. Use only can teach the gender of a noun.<sup>8</sup>

A *nomen unitatis*, or noun of the individual, is formed from a collective by the feminine formation; and in the same way a diminutive is formed from a masculine noun.<sup>9</sup>

Masculine plurals may be divided into two classes, those which take final *n*, and those which take *a* either instead of a final vowel of the singular, or instead of the vowel before its last letter. These two forms are sometimes combined. But the final *n* is the most general mark of the plural, it becomes for facility of utterance *an, en, or in*.

If *a* or *i* occur before the last syllable of a singular noun, it is generally changed to *u* in the masculine plural.<sup>10</sup>

Feminine plurals prefix *t* to the masculine plural.

If a masculine plural end in *n* or *en*, the plural of the feminine will end in *-in*; if in *-an*, the feminine often ends in *atin*.

Feminine singulars ending in *a* or *i* generally make plural in *-uin*; sometimes, but rarely, in *-ua*.<sup>11</sup>

153. The marks of case are placed before the noun, *n, en, or ne* for genitive, *i* for dative, *s* for ablative; there is no element for the accusative<sup>12</sup> or for the nominative.

There is no article; but the demonstrative, followed by *n* of the genitive, may be used to represent a preceding noun in apposition with a following one.<sup>13</sup>

<sup>1</sup> Hanoteau, p. ix. note.

<sup>4</sup> Ibid. p. 3-10.

<sup>7</sup> Ibid. pp. 15, 16.

<sup>10</sup> Ibid. p. 19-23.

<sup>2</sup> Ibid. p. xxi.

<sup>5</sup> Ibid. p. 11-13.

<sup>8</sup> Ibid. pp. 17, 18.

<sup>11</sup> Ibid. pp. 24, 25.

<sup>13</sup> Ibid. p. 29.

<sup>3</sup> Ibid. p. xiv.

<sup>6</sup> Ibid. pp. 10, 13.

<sup>9</sup> Ibid. pp. 19, 29.

<sup>12</sup> Ibid. pp. 27, 28.

The cardinal numbers take a feminine form when connected with a feminine noun.<sup>1</sup>

154. The separate personal pronouns are :

In the singular, <sup>1</sup>*nek*, <sup>2</sup>*kai* masc., *kem* fem., <sup>3</sup>*enta* masc., *entat* fem.; in the plural, <sup>1</sup>*nekkeniḏ* masc., *nekkenetiḏ* fem., <sup>2</sup>*kaweniḏ* masc., *kametiḏ* fem., <sup>3</sup>*entenḏ* masc., *etenetiḏ* fem. The first and second singular may be strengthened with *-u*, *-unan*, or *-udeṛ*, and the third singular masculine with *-deṛ*.<sup>2</sup>

The possessive suffixes are, in the singular, <sup>1</sup>*-i*, <sup>2</sup>*-k* masc., *-m* fem., *-s*; in the plural *-neṛ*, *-nuen* masc., *-enkemet* fem., *-nesen* masc., *-nesenet* fem. The initial *n*, *en* in the second and third plural suffixes, seems to be pronominal connective. The first singular *-i* may be preceded or followed by *n*, which seems to be part of the first person; the second and third singular suffixes may be preceded by *enne*, which is probably connective, the third singular being *-ennes* or *-ennit*.<sup>3</sup> The possessive suffixes may be preceded not only by *n* but also by *in*, the first singular becoming *-u*; they are then *inu*, *inneḱ*, *innem*, *innes* or *innit*, *inneneṛ*, *innuen*, *innekemet*, *innesen*, *innesenet*.<sup>4</sup>

The object suffixes of the verb are <sup>1</sup>*-i*, <sup>2</sup>*-k* <sup>3</sup>*-m*, *-t* *-tet*; <sup>1</sup>*-neṛ*, <sup>2</sup>*-wen* <sup>3</sup>*-kemet*, <sup>3</sup>*-ten* *-tenet*; the indirect object suffixes are <sup>1</sup>*-i*, <sup>2</sup>*-k* <sup>3</sup>*-m*, *-s*; <sup>1</sup>*-neṛ*, <sup>2</sup>*-un* <sup>3</sup>*-kemet*, <sup>3</sup>*-sen* *-senet*; of these latter the second and third persons take before them *a* or *ha*, sometimes in the singular, always in the plural.<sup>5</sup>

The simple demonstrative is in the singular *wa* or *a* masculine, *ta* feminine; in the plural, *wi* masculine, *ti* feminine; the stronger demonstrative is *awa* this, *awin* that. The preceding may all be strengthened with a demonstrative element *-reṛ* or *-deṛ*; <sup>6</sup> there are also separate demonstratives *dideṛ* there, *da* here, *din* there, *neṛwin* masculine, *neṛtin* feminine, *voici*. The demonstrative is used for a relative, and it then precedes a preposition which governs it.<sup>7</sup>

The reflexive pronoun is the separate personal pronoun followed by *iman*, with the possessive suffix, as *nekku iman'in*, myself, which Hanoteau translates *moi personne de moi*; when it is governed by a preposition this is inserted before *iman*, as *nekku siman'in*, from myself.<sup>8</sup>

The interrogative for persons and things is *ma*; its substantive is connected with it in the genitive; it precedes a preposition which governs it.<sup>9</sup>

<sup>1</sup> Hanoteau, p. 127.

<sup>4</sup> Ibid. p. 34.

<sup>7</sup> Ibid. pp. 38, 46.

<sup>2</sup> Ibid. p. 32.

<sup>5</sup> Ibid. p. 35.

<sup>8</sup> Ibid. p. 45.

<sup>3</sup> Ibid. pp. 32, 33.

<sup>6</sup> Ibid. p. 37.

<sup>9</sup> Ibid. pp. 46, 48.

The demonstratives *wa*, *ta*, *wi*, *ti*, may take the possessive suffixes and express *le mien*, &c.<sup>1</sup>

155. The adjective is included within the verb, being expressed by a participle,<sup>2</sup> and having no forms for degrees of comparison. It agrees with its noun in gender and number, except that in the plural it has only one form for both genders.<sup>3</sup>

The subject affixes of the verb are :

Singular.					Plural.				
1.	.	.	.	—	<i>î</i>	1.	.	.	<i>n</i> —
2.	.	.	.	<i>t</i>	— <i>d</i>	2.	masculine	.	<i>t</i> — <i>m</i>
3.	masculine	.	<i>i</i>	—		2.	feminine	.	<i>t</i> — <i>mt</i>
3.	feminine	.	<i>t</i>	—		3.	masculine	.	— <i>n</i>
						3.	feminine	.	— <i>nt</i>

The verbal stem with these person elements is an indefinite tense which expresses the fact thought as completed without defining the time.<sup>4</sup> It is sufficiently analogous to the Syro-Arabian perfect to be called the perfect.

It is changed into an actual present in certain verbs, generally those which have more than two radicals, by *a* before the last radical, which becomes *i* when negated; in others a derived form expressive of habit gives duration to it.<sup>5</sup>

It is put in the past by being preceded by *kelad*, which, followed by actual present, expresses imperfect, and by perfect a pluperfect; and it is put in the future by having *ad* prefixed, or to make it stronger *ha* or *îa*.<sup>6</sup>

The second singular imperative is the stem of the verb; the second plural is *-t* masculine, *-met* feminine.<sup>7</sup>

156. Verbs having one or two radical consonants often begin with a vowel which appears, from its changeableness, not to be radical. When this vowel is *a* in the imperative and future, it is generally *u* in the perfect; in a few instances it is *i* in the imperative and future, and *u* in the perfect.<sup>8</sup>

A very great number of verbs having one or two radical consonants take *i* at the end of the root in the first and second singular, and *a* in all the other persons; which, however, generally changes to *i* when the verb is negated, and often, when in the third singular or first plural, it takes an object suffix of the third singular, sometimes also with that of third plural, the *t* of the suffix being then dropped; <sup>9</sup> the vowels *a*, *e*, following in the imperative a doubled radical, sometimes change to *u* in the tenses.<sup>10</sup>

157. A participle is formed by subjoining, for the masculine singular, *n* to the third singular masculine of the perfect, for the feminine singular, *t* to the third singular feminine of the perfect; a plural for both genders is formed by adding to the masculine singular the termination of the plural as in substantives. This participle thus formed

<sup>1</sup> Hanoteau, p. 33.

<sup>2</sup> Ibid. p. 55.

<sup>3</sup> Ibid. p. 56.

<sup>4</sup> Ibid. p. 50.

<sup>5</sup> Ibid. pp. 57, 58.

<sup>6</sup> Ibid. pp. 60, 61.

<sup>7</sup> Ibid. p. 63.

<sup>8</sup> Ibid. p. 50-54.

<sup>9</sup> Ibid. pp. 58, 60.

<sup>10</sup> Ibid. pp. 61, 62.

from the perfect is past, when similarly formed from present or future it is present or future.<sup>1</sup>

158. The verb has several derived forms with elements prefixed or suffixed to the verbal root.

1, *s-*, causative; 2, *tu-*, passive; 3, *m-*, reciprocal when used with causative, passive, neuter; 4, *nm-*, *nim-*, reciprocal; 5, *-t*, become; 6, *t-*, habitual; 7, second radical doubled, habitual; 8, *a* before last radical, habitual, used generally with causatives and passives; 9, *n* before the last radical, habitual, used with causatives; 10, *-a*, *-i*, *-u*, habitual, used with causatives and with combinations of 1, 2, and 3.<sup>2</sup>

There are the following combinations of these forms, 2, 1; 1, 4; 3, 1; 8, 1; 9, 1; 8, 2; 6, 3; 6, 4; 6, 5; 10, 2, 1; 10, 1, 4; 6, 3, 1, 8.<sup>3</sup>

The conjugation of the derived forms differs in nothing from that of the simple verb.<sup>4</sup>

The habitual forms express the frequentative, the continued.<sup>5</sup>

The second form and the sixth do not generally admit the vowel changes of 156.<sup>6</sup>

In the third form a changeable *a* (156) becomes *i* after *m*, and the other vowel changes of 156 generally take place.<sup>7</sup>

159. With a negative the future is expressed by an habitual perfect, and the imperative by an habitual imperative.<sup>8</sup>

The reflexive verbal idea is expressed by the verb, followed by *iman*, soul, person, with the proper possessive suffix.<sup>9</sup>

There is a verb *emus*, a copula, and a verb *el*, to have.<sup>10</sup>

An interrogation is expressed with *mir* after the verb, whether immediately or not.<sup>11</sup>

A verb is negated by being preceded by *our* or *ou*, and *a* in the last syllable then becomes *i*<sup>12</sup> (155, 156).

A future past (shall have) may be expressed by the future of *emus*, followed by the perfect of the verb, each with its person. But such relative tenses are little used.<sup>13</sup>

The verbal infinitive is generally expressed by the future, and the nominal infinitive by the verbal noun.<sup>14</sup>

160. When personal suffixes are employed both for the direct object and the indirect, the indirect precedes the direct; and when the verb is affected also with the adverbial *el* (here, hereupon), this follows the object suffixes.<sup>15</sup>

Any particle affecting a verb attracts to itself from the verb an object suffix, the adverbial suffix *el* here, hereupon, or the subjoined *n* which forms the participle.<sup>16</sup>

The particles *a*, *as*, *ra*, *ha*, before a verb strengthen the assertion, *a* and *as* being used before the past, *ra* and *ha* before the future; they seem each to involve a demonstrative element.<sup>16</sup>

161. Verbal nouns of the action are formed from the verbal stem

<sup>1</sup> Hanoteau, pp. 63, 64.

<sup>4</sup> Ibid. p. 68.

<sup>7</sup> Ibid. p. 72.

<sup>10</sup> Ibid. pp. 83, 85.

<sup>13</sup> Ibid. p. 91.

<sup>2</sup> Ibid. p. 66.

<sup>5</sup> Ibid. p. 76.

<sup>8</sup> Ibid. pp. 76, 91.

<sup>11</sup> Ibid. p. 87.

<sup>14</sup> Ibid. pp. 92, 93.

<sup>16</sup> Ibid. p. 99.

<sup>3</sup> Ibid. p. 67.

<sup>6</sup> Ibid. pp. 71, 77.

<sup>9</sup> Ibid. p. 82.

<sup>12</sup> Ibid. pp. 87, 88.

<sup>15</sup> Ibid. p. 94-98.

as follows: 1, *a* ; 2, *a*-, with *a* between the radicals ; 3, *a*-, with *u* before the last radical ; 4, *t* -*t* ; 5, *t* -*aut* ; 6, *t* -*i*. The first formation is used with causatives and with some passives and reciprocals ; some nouns of this formation end in *i*. The second formation belongs to verbs of three radicals, and these verbs have generally at the same time nouns of action of the third and fifth forms. The sixth form is the most frequent, its *t* is generally followed by *i*, and a changeable *a* (156) becomes *u*.<sup>1</sup>

Nouns of the agent are formed by prefixing *a* to the verbal stem, and inserting *a* before its last radical, or by prefixing *an*, *am*, or *aum*, often also with insertion of *a* before the last radical.<sup>2</sup>

162. "The number of the particles which correspond to our prepositions, adverbs, and conjunction is restricted enough in Tamachek ; and each of them may be translated into French by many different words, according to the sense of the phrase. The prepositive, adverbial, and conjunctive expressions are formed either by means of verbs or by pronouns and particles, or by the help of substantives verbal for the most part and denoting a state or manner of being."<sup>3</sup>

The prepositions in accordance with their nominal nature take the possessive suffixes.<sup>4</sup>

This deficient sense of relation is accompanied by a remarkable tendency to connect related objects by means of pronominal elements ;

he said to him to father his of young man  
thus *i'na'ha* · *s* *i* · *ti* · *s* *n'abara*!, he said to the father of the young man.<sup>4</sup>

It is also probably the reason that any particle preceding a verb as relative to it attracts to itself from the verb any element suffixed to the latter ; for owing to the deficient sense of relation the mind fails to think a relative element transitionally, and tends to take up into it the consequent, omitting the transition. When an element is relative to a fact it tends to take up what the verb passes to in the conception of fact, omitting the transition, that is, the verb itself.

163. There is in this language a singular mixture of African and Syro-Arabian characteristics. And the African characteristics are different from those which show themselves in Ethiopic and Amharic.

In the latter languages there is evidence of a tendency to contract the act of thought by limitation of its object (123, 146), and also of a tendency to detach from the verbal stem the process of being or doing (125, 145), both which characterise African speech. But in Tamachek the principal African feature is the tendency which distinguishes the Kafir languages to express as a prefix the substance of the noun and the subject person of the verb. The rules given in 152 in reference to the initial letters of nouns are strikingly suggestive of the structure of Kafir nouns, or rather of this in its reduced form as it appears in West Africa in Oti, Bullom, and Woloff, and the tendency to put the person before the verb led to the application to the perfect of the personal prefixes which in Syro-Arabian belonged to the imperfect, so as to abolish the distinction between these two tenses. Such a part of the verb, indefinite as to position in time, is found generally in

<sup>1</sup> Hanoteau, pp. 101, 102.

<sup>2</sup> Ibid. p. 105.

<sup>3</sup> Ibid. p. 103.

<sup>4</sup> Ibid. p. 36.

African languages. It is the action of African influence on a Syro-Arabian language which seems to be indicated in the Tamachek formations. Indeed, it is remarkable that these retain so much of that essentially Syro-Arabian feature, internal vowel change, not only in the verbal formations, but also in the plural nouns. The grammatical elements also are to a great extent Syro-Arabian; *t* for the feminine gender and for the *nomen unitatis*; the nasal for the plural, the broad vowel *a* for the plural (130), the elements of the personal pronouns, the elements of the derived forms of the verb; *a* expressive of the stronger process of being or doing, differently applied, however, in Tamachek, in which often it expresses an actual present or a future, and absorbed by the first and second singular, so as to be reduced to *i*, while it has to be supplied with the other more objective persons, changed into *i* also in the last syllable after a negative, as in the present tense of Kafir verbs.

lion with panther with with jackal past  
 164. Example: *Awagqas d · ahar et · tahuri d · abeggi kelad*  
 be 3d pl. pl. comrade pl. day one hunt 3d pl. find 3d pl. sheep kill 3d pl.  
*emus · en imidaw · en; ahel ien geddel · en egraw · en tehali enra · n ·*  
 her 3d sing. speak lion 3d sing. say to them who to us 3d sing. divide  
*tet; i · siul awagqas i · ma'ha · sen, ma'ha'ne' i · zzun ·*  
 part. pl. meat pl. these say 3d pl. jackal he that 3d sing. be little part. among  
*en isa · n wi'der; enna · n abeggi enta wa i · nderr · en de ·*  
 us 3d sing. divide jackal pl. meat pl. 3d sing. make four fem. parts 3d sing.  
*ner; i · zzun abeggi isa · n i · ga okkoz · et teful; i ·*  
 say to them come 2d pl. imper. each one fut. 3d sing. take part of it  
*ma'ha · sen aian · t ak ien ad i · etkel tafult · enn'it;*  
 3d sing. come hereupon lion 3d sing. say to him to jackal which of all  
*i · usa · d awagqas i · ma'ha · s i · abeggi ma neket*  
 part. my among them 3d sing. say to him jackal be like 3d pl. fem. take one  
*tafult · i n · d · esenet; i · ma'ha · s abeggi ula · net etkel iie'*  
 fem. that to thee 3d sing. fem. pleasing becomes 3d sing. say to him lion not  
*t ta'ha · k t · egraz · et; i · ma'ha · s awagqas ur*  
 2d pers. know sing. division 2d sing. strike him 3d sing. kill him when 3d sing. die  
*t · essired tazzzunt i · iuit · t i · nra · t; as i · mmut*  
 jackal seek 3d pl. that fut. 3d. sing. divide part. meat pl. 3d sing. fem. say to  
*abeggi egmi · en wa ha i · zzun · en isa · n; t · enna ha'*  
 them I dem. fut. 3d sing. divide part. 3d. sing. fem. mix meat pl. of  
*sen tahuri nekku · n ha i · zzun · en t · eserti isa · n n'*  
 jackal with meat pl. of sheep 3d sing. fem. begin division 3d sing. fem. make  
*abeggi d · isa · n entchali t · ules tazzzunt t · ega*  
 six fem. parts they three of them when 3d sing. see lion that 3d sing.  
*sedis · et teful entenid kerañ · esen; as i · ni awagqas awin i ·*  
 say to 3d sing. obj. we three of us parts these fem. six fem. who  
*ma'ha · s nekkenid kerañ · ne' teful ti · der sedis · et ma'*  
 them fem. be part. 3d sing. fem. say to him this of lion this  
*tenet ilan; t · emma'ha · s tahuri ta rer' wawagqas, turer'*  
 of chief of us that of three fem. of eye pl. dem. pl. fem. 3d pers. be red part.  
*nameqqar · ne' ta · skerañ · et entitt · awin ti i · segger · n ·*  
 pl. fem. 3d sing. fem. say 3d sing. obj. lion who 2d pers. pron. fem. 3d sing. caus.  
*in; i · nua · s awagqas ma kem i · s ·*  
 learn part. division this 3d sing. fem. say to him stroke that fem. kill  
*elmed · en tazzzunt tarer; t · enna ha · s tiuit ta inra'*  
 part. jackal it to me 3d sing. caus. learn part. division this  
*n abeggi entat · h i i · s elmed · en tazzzunt tarer. Lion and*

panther and tahuri and jackal were comrades; one day they hunted, they found a sheep, they killed her; lion spoke, and said to them, Who is to divide to us these meats? they said, Jackal, he that is least of us. Jackal divided the meats; he made four parts; he said to them, Come, each one shall take a part of it; hereupon lion came, said to him, to jackal, Which of all is my part among them? jackal said to him, They are alike, take one that is pleasing to thee; lion said to him, Thou knowest not division; he struck him, he killed him. When jackal died they sought (one) that would divide the meats; tahuri said to them, Here am I to divide; she mixed meats of jackal with meats of sheep; she began division; she made six parts, they (being) three; when lion saw that, he said to her, We (are) three, these six parts, who owns them? tahuri said to him, This for lion, this for our chief, the third for the eyes that are red; lion said to her, Who taught thee this division? she said to him, The stroke that killed jackal, it taught me this division; <sup>1</sup> *imɪɔɔɔɔɔɔ* is masculine plural of *amidi*, <sup>2</sup> the feminine plural is *timɪɔɔɔɔɔɔ*; <sup>3</sup> *mahaner*, the interrogative and relative pronouns, are amongst those particles which, preceding a verb, attract suffixes belonging to the verb, though not the participial -*n* (160, 162); a relative or interrogative pronoun is followed by a participle; <sup>4</sup> *teful* is the plural of *taful*; <sup>5</sup> *aiant* is imperative of an obsolete verb; <sup>6</sup> *egrazet* seems to be a derived verb of the fifth form (158); *tiffawin* is plural of *tif*; a personal pronoun as subject attracts the object suffixes from the verb, thus *entat'hi*.

## HAUSSA.

165. The Hausa language, which borders on Tamachek to the south, shows traces of affinity to it, and through it to the Syro-Arabian, but so faint and uncertain that one might say that Syro-Arabian features vanish in Hausa.

Its consonants are *h, k, g, ɲ, y, t', t, d, t', s, z, r, l, n, f, w, b, m*; *gb* is a double consonant, characteristic of these parts of Africa; *kw* also occurs. The vowels are *a, e, i, o, u*; the diphthongs are *ei* and *oi*; other concurrent vowels get each its full sound; *u* becomes *m* before *b*.<sup>6</sup>

166. Abstract nouns of action or quality are formed by *-ta*; nouns of the agent by *ma-*, *mai-* singular, *masu-* plural; diminutives by *dah-* singular, *yaya-* plural.<sup>7</sup>

Nouns have two numbers, singular and plural. The plural is formed so variously as to be scarcely reducible to rule; sometimes by *-una*, *-ua* substituted for last vowel; sometimes by *-i*, or by *-i* preceded by the same consonant as that which begins the last syllable, changing also the final vowel into *uo* or *o* or *a*; sometimes by inserting *a* before the last syllable.<sup>8</sup>

There are two genders, masculine and feminine, which, however, seem to be principally sexual; the termination *-i* belongs chiefly to the masculine, *-a* to the feminine.<sup>9</sup>

<sup>1</sup> Hanoteau, p. 133.

<sup>2</sup> Ibid. p. 23.

<sup>3</sup> Ibid. p. 24.

<sup>4</sup> Ibid. p. 64.

<sup>5</sup> Ibid. p. 126.

<sup>6</sup> Schön, Gram. Hausa, p. 1-3.

<sup>7</sup> Ibid. p. 4.

<sup>8</sup> Ibid. p. 5.

<sup>9</sup> Ibid. p. 6.

Cases are expressed by prepositions ; *n-* belongs to the genitive, but is more frequently omitted. The genitive follows its governing noun ; the object without mark of case follows the verb, and the subject always precedes the verb.<sup>1</sup>

Adjectives are few, and may either precede or follow the noun. They sometimes have the endings *-i* masculine, *-a* feminine ; but are sometimes formed with the connective pronominal prefixes *na-* masculine, *ta-* feminine, or *ma-*, *mai-* singular, *masu-* plural. Sometimes, instead of an adjective qualifying a noun, another noun is used, either in apposition to the former or governed by it.<sup>2</sup>

There is no adjectival expression of degrees of comparison.<sup>3</sup>

167. The personal pronouns are, in the singular, first, *ina* masculine, *nia* or *ta* feminine ; second, *ka* or *kai* masculine, *ki* feminine ; third, *si*, *ya*, or *sa* masculine, *ta*, *ita*, or *tai* feminine ; in the plural, first *mu*, second *ku*, third *su*, sometimes uttered with final *n*.<sup>4</sup> In Vei also the first plural is *mu*. The reflexive element is *kan*, as *kanka*, thyself ; but with the first singular it is *kai*.<sup>5</sup>

The demonstrative elements are *wa*, *na*, *da*, which may be variously compounded with each other ; the interrogative and relative, *mi*, *meh*, *wonne*, *wonna*, *ena*, *kaka*, *wa*, *da*, *wodda*, *wonne* ; the indefinite, *kowha*, *wosu*.<sup>6</sup>

168. The verb has in some few instances the following derived forms, inceptive *-ua*, completive *-o*, passive *-u*, little used. Some verbs are formed with *-sie*, which is changed to *-sa* in the third singular masculine and feminine.<sup>7</sup>

An actual present is expressed by *na* between the subject person and the verb, and sometimes a perfect by *ka* in the same place ; a future is expressed by repeating before the verbal stem the final vowel of the subject person ; the subject person followed by the verbal stem expresses a perfect.<sup>8</sup>

There is a verb of existence present or past, *na*, *neh*, *keh*, or with feminine subject *ʔe* : of existence future, *samma*, with the final vowel of subject person prefixed.<sup>9</sup>

169. There are very few prepositions or conjunctions.<sup>10</sup>

170. Examples : (1.) *Wondila* <sup>which</sup> *keh* <sup>be</sup> *yaskia* <sup>certainly</sup> *karami* <sup>little</sup> *ga* <sup>by</sup> *iri* <sup>seed</sup> *duka* <sup>all</sup>,  
which is in fact the smallest of all seeds.<sup>11</sup> (2.) *Da* <sup>and</sup> *makiya* <sup>foes</sup> *mutum* <sup>man</sup>  
they be men gen. him  
*su* *neh* *mutani* *n* *sa*, and a man's foes are his own people ;<sup>11</sup> *da*  
is the same as Tamachek *de* or *d* ; *makiya* is plural of *makiyi*, and  
*mutani* is plural of *mutum*. (3.) *Mutum* <sup>man</sup> *nigari* <sup>good</sup> *daga* <sup>from</sup> *keao* <sup>good</sup> *n* <sup>gen.</sup>  
treasure gen. heart he bring out things which pl. good bad man  
*surukumi* *n* *suf* *ia* *ya* *kao* *wose* *abubua* *masu* *keao*, *mugu* *mutum*  
from bad gen. treasure he bring out things bad  
*daga* *mugu* *n* *surukumi* *ya* *kao* *wose* *abubua* *miagu*, a man that is

<sup>1</sup> Schön, pp. 6, 7.

<sup>2</sup> Ibid. pp. 8, 9.

<sup>3</sup> Ibid. p. 10.

<sup>4</sup> Ibid. p. 14.

<sup>5</sup> Ibid. p. 15.

<sup>6</sup> Ibid. p. 16-18.

<sup>7</sup> Ibid. p. 20.

<sup>8</sup> Ibid. p. 23-25.

<sup>9</sup> Ibid. pp. 21, 22.

<sup>10</sup> Ibid. pp. 29, 30.

<sup>11</sup> Ibid. p. 7.



good from the good treasure of his heart bringeth forth things which are good, a bad man from the bad treasure bringeth forth bad things;<sup>1</sup>

*abubua* is plural of *abu*, *miagu* plural of *mugu*. (4.) *Ba wonna* <sup>not that</sup> which be go inside gen. mouth

*da keh sua f'iki m' bahki*, not that which goeth into the mouth;<sup>2</sup>

<sup>they fut. allow to teach any who be</sup>  
*f'iki* means belly. (5.) *Su u' berri ga koyu kohu woddanda keh*  
<sup>wish learn</sup>

*soh koyo*, they shall be permitted to teach any who is willing to learn;<sup>3</sup> *koyu* and *koyo* do not tally with the meaning given to *-o* in 168; *woddanda* is a remarkable compound of demonstrative elements.

<sup>any he fut. do will father gen. me</sup>  
(6.) *Kohu si i' yi yirdu oba n'a*, whosoever shall do the will of my father.<sup>4</sup>

171. In the fourth and fifth examples, as well as in the actual present (168), may be observed a tendency to detach from the verbal stem the process of doing or being; and in such a word as *masukeao* there is an openness of texture, as of parts imperfectly combined. But there is nothing which can be properly regarded as the fragmentariness of pure African speech. The inner plural is still retained; and some of the grammatical elements still betray a Syro-Arabian affinity. That affinity explains the small degree in which the natural integers of thought are broken into parts, compared with what takes place in the adjacent Negro languages. When Hausa is compared with Arabic and Hebrew there may be observed, along with other much more striking differences, a comparative smallness in the separate thoughts. Such a reduction is to be seen also in Ethiopic and Amharic. For just as the Chinese family, when in Burmese it approaches the quicker thought of India, exhibits in that language a reduction or limitation in the object which the mind thinks in a single act (21, 38), so does the Syro-Arabian manifest the same tendency in Ethiopic and Amharic, as it comes under the influence of African excitability (123, 146); a tendency also to be seen in Hausa, whose affinity to the Syro-Arabian is more remote. Tamachek or Berber is less affected, being spoken by a race which is partially separated by the desert from the genuine African influence.

Throughout the five groups into which the races and languages of mankind have been put in this chapter, everywhere the tendency to think small objects in the successive acts of the mind has been found proportional to the readiness of excitability of the race, or, in other words, to the quickness and mobility of their mental action, while the tendency to think large objects has been found proportional to the slowness and persistence of their mental action.

The same concomitance of variation of thought and language will be found to prevail in the great family which remains to be studied.

<sup>1</sup> Schön, p. 10.

<sup>2</sup> Ibid. p. 16.

<sup>3</sup> Ibid. p. 17.

<sup>4</sup> Ibid. p. 18.

VI.—*The Indo-European Languages.*

1. The Indo-European languages, in their most ancient and original form, differ from the Syro-Arabian in this characteristic principle of their structure, that while the latter take into the thought of the root elements which are closely combined with it in the conception of fact, the former generally add such elements externally to the root, thinking them in a succession of mental acts of which the thought of the root is one ; and they scarcely ever think the root except as part of an idea to which the other parts are added externally to form the idea.

Now this characteristic difference receives its explanation at once from the law which has been traced in the preceding sections through the languages of the world. For the Indo-European structure is a partial breaking into fragments of integers of thought which Syro-Arabian keeps entire, a narrowing of the momentary field of view, so as to resolve the idea into a succession of parts which the Syro-Arabian embraces in one view. And the quicker excitability of mental action which, according to our law, should correspond to this tendency to resolve speech into fragments, is found in fact to exist in the nature of the European compared with that of the Arabian and the Chinese (chap. i., Part I., Sect. V., 1, 5).

In the Syro-Arabian family of languages, when affected, as in Ethiopic, with the ready excitability of Africa, there is an approach to the Indo-European treatment of the root as a mere fragment of an idea (V. 123). And in the Chinese family the same is to be observed in Burmese, in which thought is quickened by Indian influence (V. 21). And on the other hand, in those Indo-European languages which were spoken by races of slower mental action, the root tends to be thought with more fulness as a complete idea. For in every case the magnitude of the object which the mind thinks in its single acts varies inversely as the quickness of its action.

This, however, remains to be set forth in full in the Indo-European languages, in connection with the other features of their structure ; which, however, may be more briefly stated as to those languages which are familiar to every scholar.

## SANSKRIT.

2. Sanskrit developed the consonants more than the vowels. It had the four mutes and nasal of the post-palatal, palatal, cerebral, dental, and labial orders. The ante-palatals are not in the written alphabet ; and though the dentals are often followed by *y*, they still retain their own character. Of the spirants it had the faucal *h*, the palatal, ante-palatal, and dental spirants, but no medial spirants except *y* and *v* ; of the vibratiles it had *r* and *l*. To these should be added *ṛ* to represent the vowel *r* ; for though *r* cannot be properly uttered as a vowel, it may be uttered with a sustained sonancy (202). The Sanskrit vowels *r* are described as involving a very short and a long *i* ;<sup>1</sup>

<sup>1</sup> Williams, Sanskrit Gram., p. 7 ; Bopp, Gram. Sans., sect. 12.

if this be so they ought to be written  $ṛi$  and  $ṛī$ . The cerebral  $ṛ$  also occurs in the Vedas.<sup>1</sup>

It is to be observed that the cerebrals and sonant vowel  $ṛ$ , Sanskrit has in common with the Dravidian languages, except that the latter is not properly a vowel in the Dravidian languages, as it cannot without a vowel form a syllable. There are euphonic affinities between ante-palatals and cerebrals which might suggest the supposition that the cerebrals were ante-palatals more or less changed in their utterance by Dravidian influence; thus  $ṣ$  is ante-palatal, yet its euphonic affinities are cerebral, and the affinity of  $i$  for  $ṛ$  seems to prove it to be  $ṛ$ , yet the other affinities of  $ṛ$  are cerebral.

The only simple vowels which Sanskrit has are  $a$ ,  $i$ , and  $u$ , short and long; but  $i$  or  $ī$ , and  $u$  or  $ū$ , may each be compounded with  $a$ , making what is called the Guna of those vowels, namely,  $ē$ ,  $ō$ , or with  $ā$  making what is called their Vriddhi, namely, the diphthongs  $āi$  and  $āu$ . In the same way  $ṛi$  and  $ṛī$  make Guna  $ar$  and Vriddhi  $ār$ . There is no Guna for  $a$ , but  $ā$  is Vriddhi for  $a$ .

$M$  is a weak nasal, and at the end of a word after a vowel becomes a mere nasalisation called *anusvara*; any of the nasals following a vowel and coming immediately before a spirant or vibratile in the same word is weakened to this nasalisation.<sup>2</sup> The nasal is partly absorbed by the vowel (202), and its breath partly taken by the spirant or vibratile.  $V$ , when immediately preceded in a word by any other consonant than  $r$ , is pronounced  $w$ .

The cerebral consonants are rarely found at the beginning of words.<sup>3</sup>

There is no accent in ordinary speech,<sup>4</sup> and each word runs into the next, a final vowel of the former either combining with an initial vowel of the latter or becoming a semi-vowel before it; but if  $a$  as initial of a word follows a final  $ē$  or  $ō$  it is dropped; if a final  $ē$  or  $ō$  comes before any other initial vowel but  $a$ ,  $ē$  is changed to  $ay$ ,  $ō$  to  $av$ , and the  $y$  or  $v$  is dropped if the initial be that of another word, but retained if it be that of an affix.<sup>5</sup>

Sanskrit utterance was indolent, and deficient in versatility, as appears from the extent to which it weakened the consonants and slurred over the transitions of utterance by changing concurrent elements.

The tennes, as well as  $χ'$ ,  $s$ , and  $s$ , being called hard, and the other consonants soft, a tenuis at the end of a word or stem generally becomes unaspirated medial before a soft or vowel initial; and a medial at the end becomes unaspirated tenuis before a hard initial, throwing back its aspiration if it be aspirate on an initial  $g$ ,  $d$ , or  $b$ ; but a nasal initial generally turns into a nasal a preceding final consonant;  $t$  or  $d$  at the end of a word is assimilated by an initial  $k'$ ,  $g'$ , or  $l$ ;  $t$  or  $d$  at the end of a word being followed by an initial  $χ'$ , both the final and the initial become  $k'$ ;  $k'$  or  $g'$  at the end of a stem before  $t$ ,  $t'$ , or  $s$ , becomes  $k$ ;  $d'$  at the end of a stem becomes  $d$ , and  $b'$  becomes  $b$  before  $t$  or  $t'$ , and these become  $d'$ ; if  $n$  at the end of a word is followed by an initial  $k'$ ,  $t$ , or  $t'$ , then  $χ'$ ,  $s$ , or  $s$ , is inserted between

<sup>1</sup> Williams, p. 8.<sup>2</sup> Ibid. p. 5.<sup>3</sup> Ibid. pp. 9, 10.<sup>4</sup> Ibid. p. 14.<sup>5</sup> Ibid. p. 22-24.

(177), and *n* becomes *anuswara*; *s* or *r* at the end of a word becomes a mere breathing before an initial *k*, *k'*, *p*, *p'*, *χ'* or *s*, or at the end of a sentence; *s* at the end of a word, preceded by *a*, becomes *u* before a soft consonant or *a*, and combines with the *a* preceding it into *ō*, but before any vowel except *a* it is dropped; also if the initial is *a* instead of a soft consonant this *a* is dropped; *s* at the end of a word, preceded by *ā* before a soft consonant or a vowel, is dropped; *s* at the end of a word, preceded by any other vowel but *a* or *ā*, and followed by a soft consonant or a vowel, becomes *r*, unless the following initial be *r*, in which case the *s* is dropped, and the preceding vowel is lengthened; the pronouns *sas* and *ēsas* drop the final *s* before any consonant; *h* at the end of a stem beginning with *d* becomes *g* before *t* or *t'*, and the *t* or *t'* becomes *d'*; *h* at the end of a stem not beginning with *d* or *n* is dropped before *t* or *t'*, and the radical vowel lengthened, *t* or *t'* becomes *d'*; *r* at the end of a word before a tenuis becomes spirant; *r* at the end of a word preceded by *a*, and followed by *r*, is dropped; *χ'* at the end of a stem before *t* or *t'* becomes *s*, and the *t* or *t'* becomes cerebral; *χ'* or *s* at the end of a stem before *d'* becomes *d*, and the *d'* becomes *d'*; *s* at the end of a stem before *d'* becomes *d*, *s* before *s* becomes *t*. At the end of a word, or at the end of a stem before an affix beginning with a consonant, concurrent consonants are not permitted, an aspirated consonant drops its aspiration, *h* becomes *k* or *t*, a palatal becomes guttural or cerebral, *χ'* and *s* become either *k* or *t*.<sup>1</sup>

3. The noun has three genders, masculine, feminine, and neuter, and three numbers, singular, dual, and plural.

Nominal stems ending in *a* are apt to express the feminine gender by lengthening *a*; the feminine gender is also expressed by *-ī*; some stem endings, as *-ti*, are exclusively feminine, others, as *-ana*, *-tva*, *-ya*, *-tra*, neuter; others of all genders.

The Sanskrit root, in becoming a nominal or verbal stem, often affects its vowel with Guna or Vriddhi, that is, combines with it *a* or *ā* (2). This change cannot be explained on euphonic principles. It is no doubt expressive of a greater fulness in the thought of the root when embodied in certain stems than as thought in the abstract or in other stems. The vowel *a* is suggestive of strength by reason of its large volume of breath and the additional action of the chest which its utterance brings into play; whereas *i* reduces this to a minimum, and if used on account of this property will express weakness. A long vowel or Vriddhi may bring into notice the quiescence of the organs of the mouth while it is being uttered, and is then expressive of quiescence or relaxation.

Nominal stems may be divided into the following eight classes, comprising different formations, which may be illustrated by single examples:

I. Masculine and neuter stems in *-a*, feminine in *-ā* and *-ī*.

(1.) From roots: *div* shine, *dēv* a deity, *yug'* join, *yog'a* joining; *χ'ub'* shine, *χ'ub'a* beautiful, *χub'ā* fem.; *kṛi* do, *kāraka* doer,

<sup>1</sup> Williams, pp. 26-38, 124-126; Bopp, Gram. Sans., p. 36-62.

*kārikā* fem., *nr̥it* dance, *nartaka* dancer, *nartakī* fem., *tap* burn, *tūpaka* inflammatory, *tūpakā* fem.; *nī* guide, *mayana* the eye; *swap* sleep, *swapna* sleep; *χ'ru* hear, *χ'rōtra* neut., organ of hearing; *putra* son, *putrī* daughter; also others in *-ra*, *-la*, *-ma*, *-va*, *-ka*; *sprih* desire, *sprihū* fem., desire.

(2.) From nominal stems: *puruṣa* man, *puruṣatwa* neut., manliness; *suhṛid* friend, *sauhṛid-ya* neut., friendship; *puruṣa* man, *pauruṣa* manly; *dāru* wood, *dāraṇa* wooden; *vēnu* flute, *vainuvika* flute-player, *vainavikī* fem.; *puruṣa* man, *puruṣēyu* (*ēyī* fem.) manly; *sukā* pleasure, *saukṛīya* pleasurable; *-ina*, *-vala*, *-tana*, *-ka*, *-ita*, adjectives; *-maya* full of, *-dag'na* *-matra* measuring, *-dēχ'iya* *-kalpa* like, *puruṣa* man, *puruṣatā* fem., manliness; *Indra*, *Indrāṇī* wife of Indra.

II. Masculine, feminine, and neuter stems in *-i*.

(1.) From roots: *ku* sound, *kavī* masc., poet; *kyis* plough, *kyisī* fem., ploughing; *vak'* speak, *uk'ti* fem., speech; *g'nā* (*g'an* be born), *g'nātī* masc., a relation.

(2.) From a few nouns in *-a*: patronymics, *Duṣyanta*, *Dauṣyantī*, son of Dusyanta.

III. Masculine, feminine, and neuter stems in *-u*.

From roots: *kyi* do, *karu* masc., artificer; *tan* stretch, *tanu* fem., the body; *swad* taste, *swādru* sweet; *b'ā* shine, *b'ānu* masc., the sun; *d'ē* drink, *d'ēnu* fem., a cow; *kṣi* perish, *kṣay'isnu* perishing; also *-ru*, *-lu*, *-yu*, &c.

IV. Masculine, feminine, and neuter stems in *ri*.

From roots: *kṣip* throw, *kṣipt'ri* thrower; nouns of relationship, *pitrī* father; *mātṛī* mother.

V. Masculine, feminine, and neuter stems in *t* and *d*.

(1.) From roots: *kṛi* do, *kṛit* doer; *sri* flow, *sarīt* a stream. ' '

(2.) From nominal stems: *d'ana* wealth, *d'anavāt* possessed of wealth; *d'ī* wisdom, *d'īmat* wise.

VI. Masculine, feminine, and neuter stems in *-an* and *-in*.

(1.) From roots: *taks* cleave, *taksan* masc., a carpenter; *kṛi* do, *karman* neut., deed; *driχ'* see, *driχ'ran* seeing; *kṛi* do, *kār'in*, doer.

(2.) From nominal stems: *kāla* black, *kāl'iman* masc., blackness; *d'ana* wealth, *d'an'in*, wealthy (fem. *-inū*); *mēd'ā* intellect, *medāvin* intellectual (fem. *-vinī*).

VII. Masculine, feminine, and neuter stems in *-as*, *-is*, *-us*.

*Sri*, go, *sar'as* neut., water; *uṣ* glow, *uṣas* fem., dawn; *hu* offer, *har'is* neut., ghee.

VIII. Masculine, feminine, and neuter stems in any other consonant but *t*, *d*, *n*, or *s*.

These are for the most part compound stems ending in a root; but there are a few roots used by themselves as stems, like *yud'* battle, *vāk'* speech.<sup>1</sup>

4. The following are the case endings for the different stems in the three numbers:

<sup>1</sup> Williams, p. 44-53.

	Masc. in -a.	Neuter -a.	Fem. -a.	Fem. -i.	Masc. Fem. -i, -u, as <i>agnā, bānā</i> .	Neuter -i, -u.	Masc. Fem. -i.	Stems in a consonant.
SINGULAR.	Nominative . . .	-m	-a	-i	-s	—	-ā	-(s)
	Accusative . . .	-m	-am	-im	-m	—	-āram	-am, — neut.
	Instrumental . . .	-mā	-yā	-ā	-mā masc., -ā fem.	-mā	-rā	-ā
	Dative . . .	-āya	-ayai	-ai	-ā, <i>agnāyē, bānāyē</i>	-āyē	-rē	-ē
	Ablative . . .	-āt	-ayai	-ai	-as ( <i>is, ōs</i> )	-nas	-us	-as
	Genitive . . .	-āya	-ayās	-ās	-as ( <i>is, ōs</i> )	-nas	-us	-as
	Locative . . .	-i	-ayām	-ām	-au, <i>agnau, bānau</i>	-ni	-ari	-i
DUAL.	Vocative . . .	—, -i, -ani	-i	—	-a	— or -a	-ar	—
	Nominative, accusative, vocative . . .	-i	-i	-a	-i	-nī	-ārau	-au, -i neut.
	Instrumental, dative, ablative . . .	-āyām	-āyām	-āyām	-u	-b'yām	-rīb'yām	-b'yām
	Genitive . . .	-yōs	-yōs	-ōs	-b'yām	-nōs	-rōs	-ōs
	Nominative, vocative . . .	-ani	-as	-as	-a-as	-ini	-āras	-as
	Accusative . . .	-ani	-as	-is	<i>agnayas</i>	-ini	-rū	-i neut. preceding syllable lengthened
	Instrumental . . .	-ai	-as	-is	<i>bānayas</i>	-ini	-rū	-i neut. preceding syllable lengthened
PLURAL.	Dative, ablative . . .	-ai	-āyīs	-āyīs	-in masc.	-b'is	-rīb'is	-b'is
	Genitive . . .	-ānām	-āyās	-āyās	-an masc.	-b'yas	-rīb'yas	-b'yas
	Locative . . .	-iṣu	-āsu	-iṣu	-is, -as fem.	-inām, -unām	-rīnām	-ām
						-su	-rīsu	-su

A few feminine stems in *-ī* take *-s* in the nominative singular, and change *ī* to *iḥ* before a vowel. Feminines in *-i* and *-u* sometimes make genitive singular in *-yās*, *-wās*.

The above endings, except where the cases are given in full, are added in accordance with the laws of combination of vowels and consonants to the final of the stem as given in the first line, except that stems in *-tri* take the above endings instead of *ri*, nouns of kindred in *-tri* shortening the *ā* of the accusative singular, the nominative accusative dual, and the nominative plural. Stems ending in *-n* drop the *n* before *b'* and *s*, and in nominative singular *n* and *s* are dropped; and the preceding vowel is lengthened in the nominative and accusative singular and dual and the nominative plural if the stem ends in *-an*, but only in nominative singular if it ends in *-in*.<sup>1</sup>

In the vocative singular the *-i* combines with *-a* into *-ē*, and the *-a* with *-i* into *-ē*, with *-u* into *-ō*. The vocative involves a personification of the noun with an element of life less strong than the masculine or feminine subject; and the *-i* may perhaps be regarded as a weak substitute for feminine *-a*, but with more life than neuter *-m*, and the *-a* as an increase of breath to give life to the stem. The masculine *-a* needs no increase of strength; and the consonant stems are incapable of any. A few masculine stems in *-ā*, *-ī*, and *-ū*, monosyllabic feminines in *-ī* and *-ū*, and stems in *-ai*, *-ō*, and *-au* take *-s* in the vocative singular,<sup>2</sup> as in the nominative, perhaps because, owing to the long vowels, they need a stronger element than other stems.

5. Adjectives form a comparative degree in *-tara*, a superlative in *-tama*, or comparative in *-īyas* (nominative *-īyām* masculine, *-īyāśī* feminine, *-īyas* neuter), superlative in *-iśt'*<sup>3</sup> (see 13, 82).

Present participles, and adjectives and participles in *-rat*, *-mat*, form the feminine in *-ī*.

6. The first four cardinal numbers, *eka*, *dvi*, *tri*, *katur*, are adjectives agreeing with their noun in gender, number, and case, the third *tri* taking *tisri* for its stem when feminine; those from five to ten inclusive, *pañc'an*, *ṣas*, *saptan*, *aṣṭan*, *navan*, *daś'an*, are reduced to the root, dropping *-n*, in the nominative and accusative, but they take the plural case endings in the other cases.

The units are prefixed to the tens when added to them. The multiples of ten, *viṣ'ati*, *triṣ'at*, *kātvāriṣ'at*, *pañcāṣ'at*, *ṣaṣṭi*, *saptati*, *aṣṭi*, *navati*, are feminine substantives singular up to *ṣ'atu* 100, which, as well as *sahasra* 1000, is declined as a neuter singular substantive.<sup>4</sup>

The ordinals are *prathama*, *dvi-tiya*, *tri-tiya*, *katur-t'a*, *pañcama*, *ṣaṣṭ'a*, *saptama*, *aṣṭama*, *navama*, *daśama*, eleventh to nineteenth are formed by dropping *-u* of cardinal, twentieth to fiftieth drop final *ti* or *t* of cardinal or add *-tama*, sixtieth to ninetieth add *-tama*, or change *-ti* to *-ta*, 100th and 1000th add *-tama* or decline the cardinal as an adjective.<sup>5</sup>

7. The following are the declensions of the pronouns: <sup>6</sup>

<sup>1</sup> Williams, p. 56-79.

<sup>2</sup> Williams, p. 88.

<sup>3</sup> Ibid. pp. 93, 94.

<sup>4</sup> Bopp, Gram. Sans., sect. 136.

<sup>5</sup> Ibid. pp. 91, 92.

<sup>6</sup> Ibid. p. 95-100.

SINGULAR	Nom.	1st pers. pron.	2d pers. pron.	3d pers. that, masc. and neut.	3d pers. that, fem.	this, masc.	this, masc. and neut.	this, fem.	this, that, masc. and neut.	this, that, fem.
SINGULAR	Accus.	akam	tuam	sas tat neut.	sē	ṣgas	aiyam aiam neut.	iyam	asau adles neut. amā	asau amā
	Instr.	mām, mā	tvām, tvā	tam	tām	ṣtam, ṣnam	iamam iamam neut.	imam	adles neut. amā	amā
	Dative	mayā	tvayā	tēna	tayā	ṣtēna, ṣtēna	aiyāna aiyāna neut.	anayā	amāna amāna neut.	amāna
	Ablative	mayā	tvayā	tasmāi	tasmai	ṣtasmāi	aiyamāi aiyamāi neut.	anayā	amāna amāna neut.	amāna
	Genitive	mayā	tvayā	tasmāt	tasmat	ṣtasmāt	aiyamāt aiyamāt neut.	anayā	amāna amāna neut.	amāna
	Locative	mayā	tvayā	tasmi	tasmi	ṣtasmi	aiyamān aiyamān neut.	anayā	amāna amāna neut.	amāna
DUAL	Nom.	āvām	gaurām	tē neut.	tē	ṣtau, ṣtau	aiyam aiyam neut.	imē	amā amā	amā
	Accus.	āvām, nau	gaurām, vām	tau	tē	ṣtau, ṣtau	aiyam aiyam neut.	imē	amā amā	amā
	Instr.	āvābhyām	gaurābhyām	tābhyām	tābhyām	ṣtābhyām	aiyamān aiyamān neut.	anayā	amāna amāna neut.	amāna
	Dative	āvābhyām	gaurābhyām	tābhyām	tābhyām	ṣtābhyām	aiyamān aiyamān neut.	anayā	amāna amāna neut.	amāna
	Genitive	āvayōs, nau	gaurayōs	tayōs	tayōs	ṣtayōs	aiyamān aiyamān neut.	anayōs	amān amān	amān
	Locative	āvayōs	gaurayōs	tayōs	tayōs	ṣtayōs	aiyamān aiyamān neut.	anayōs	amān amān	amān
PLURAL	Nom.	vayam	vayam	tē	tās	ṣtē	aiyam aiyam neut.	imān	amā amā	amā
	Accus.	asmān, nas	gaurasmān, vas	tān	tās	ṣtān, ṣtān	aiyam aiyam neut.	imān	amā amā	amā
	Instr.	asmābhyas	gaurasmābhyas	tas	tas	ṣtas	aiyam aiyam neut.	imān	amā amā	amā
	Dative	asmābhyas	gaurasmābhyas	tas	tas	ṣtas	aiyam aiyam neut.	imān	amā amā	amā
	Ablative	asmāt	gaurasmāt	tas	tas	ṣtas	aiyam aiyam neut.	imān	amā amā	amā
	Locative	asmān, nas	gaurasmān, vas	tas	tas	ṣtas	aiyam aiyam neut.	imān	amā amā	amā



The final *m* of the nominative singular, dual, and plural of first and second personal pronoun doubtless expresses personality.

There is a modification of the pronoun *sas*, rarely used, which has *y* after the initial consonant in every case ; there is a feminine and neuter of *śsas*, declined by prefixing *ś* to the cases of *sā* and *tat*, *n* being interchangeable with *t* where it is interchangeable in the masculine.

The variety of stems of the above pronouns is very curious, and the strengthening of them with *sma* masculine and neuter, *śya* feminine, which is doubtless a demonstrative or identifying element. The relative pronoun substitutes *y*, and the interrogative *k*, for the initial of *sas* throughout its declension, masculine, feminine, and neuter ; *kim* is also an interrogative stem ; *k'it*, *api*, and *k'ana* suffixed to the cases of the interrogative makes an indefinite pronoun ; *-diya* makes possessive pronouns ; *sua* is the stem for own.

8. The declensions of the nouns and pronouns present some notable features. Of the former it is only masculine and neuter stems ending in *-a* which distinguish in the singular the ablative from the genitive. The difference between these two cases is that between of and from (chap. iv. 13), that is, between what is still a part of another thing and what has quite parted from it. The genitive corresponds to the beginning of the parting, the issuing from, the ablative to its completion ; and if these be not distinguished, they will meet in an intermediate degree of partition thought as going on. Now, those substantives to which the mind passes with a more distinct sense of the relation in which they stand must be thought more strongly than others as objects, and this element in their idea, which in Def. 4 has been called the substance, must be stronger than it is in other substantives. It is probable, therefore, that such a strong sense of the substance is expressed by the *-a* of these stems, and with these the genitive is distinguished as an issuing forth (*śya*, 26, 27) from the ablative *t*. The *a* of the feminine stems refers not so strongly as *a* of the masculine to the substantive as object, because it is lengthened to express another thought, namely, relaxation or weakness (3), and the endings of the other stems are either weaker than *a*, or they belong in whole or in part to the attributive part of the substantive idea (Def. 4). And with all these the ablative is undistinguished from the genitive, being thought as partition going on, and expressed by *-s* instead of by *-t*, in which the motion has ceased. There is a similar cessation of motion in *t* of the passive participle (35), and in *t* of the superlative *-iśt'a* contrasted with the comparative *-īyas* (5).

The genitive singular of the first and second personal pronouns is peculiar in this respect, that it does not involve an element of relation, but is expressed by a reduplication of the stem as if it were connected without sense of transition with what governs it, the mental act of connection, however, involving a second thought of the person (155). An immediate connection with the personal pronoun of that which governs it in a genitive relation is frequent in language. It is in truth manifested in the tendency to express that relation by affixing the personal genitive to the noun, and thus particularising the idea of the latter as a

personal possession. But in Sanskrit it is only those pronouns whose personality is strongest, namely, the first and second singular, which thus tend to impart themselves to that which is connected with them by the genitive relation ; and when that connection is thought less closely their dative is used for the genitive. In whichever way the genitive is expressed in these two pronouns it is thought quite differently from the ablative, and this gets its own proper expression in *-at*.

9. The two genitive endings *-sya* and *-as* might suggest the conjecture that the genitive element had originally a fuller form *syas* ; and such a supposition would be supported by the Latin genitive *-ius*, which would correspond to *-yas*, also by the old genitive of second personal pronoun *τεοῦς* (64). There may possibly be also a trace of an original *n* in the genitive plural in Sanskrit, in which *n* takes the place of the *s* of the genitive (13), and this would lead to the supposition that the original form was *-syans*, which would be very similar to the Sanskrit comparative ending *-īyans*, and would probably have a similar significance of production or increase. But the *n* of the genitive plural is more probably due to weakening and softening of the inflection in the noun by the preceding long vowel (209).

The inflection of the nominative plural, like that of the genitive singular, involves *-i* as well as *-as*, which may be seen in the *a*-stems of the Sanskrit pronouns, and in all the corresponding stems in Greek and Latin. And this would lead to the supposition of an original ending *-yas* (164). Now this supposition is countenanced by the old Latin nominatives *vireis*, *gnateis*, *populeis*, *ministriis*,<sup>1</sup> and by the Greek *ἡμεῖς*, *ὑμεῖς*, from the *a* stems *asma*, *yusma*.

The Vedic nominatives also in *-sas*,<sup>1</sup> to which the Zend correspond, suggest a further addition, and lead to the conjecture that the original ending was *-syas* (see also 113).

The genitive ablative ending of the feminine stems ending in *ā* and *ī* involve a thought of the noun, or, in other words, a pronominal element referring to the noun, for the *a* is evidently lengthened by the gender of the noun. This renders it probable that the *a* of the ablative ending *at* is pronominal also.

10. Just as the genitive and ablative relations are thought more fully with *-a* stems masculine and neuter than with the others, so is the instrumental relation, which gets with them in the singular its fullest expression *ina*. With all the other stems it is reduced to *ā*, which seems to absorb the prolongation of feminine *-a*. The use of the instrumental case ending in adverbs, which express direction of motion, suggest that perhaps its original meaning is along of (225), motion according to the way defined by the stem. It expresses not only the instrument, but the manner.

11. The dative ending also has in the singular its strongest form *-aya* with the masculine and neuter *-a* stems. The dative singular of the second personal pronouns suggests that the original form perhaps was *ab'yam*, *m* denoting the object, and *ab'ya* the proximate, akin

<sup>1</sup> Bopp Vergl. Gram., sect. 228 b.

to Skr. *ab'i* to, *phi* by; and this is confirmed by the dative dual, in which also the masculine and neuter *-a* stems have the strongest forms, for the *a-* and *-i* of the feminine is not case, but gender.

Feminine stems in *-a* take *y* before all the case endings which begin with a vowel in order to preserve their final vowel; and neuter stems in *-i* and *-u* take *n* for the same purpose, the quiescence of *n* suiting their lifeless nature. But masculine and feminine stems in *-i* and *-u* do not seek to preserve these vowels; what they add to the radical or attributive part being perhaps a less important and weaker element, while the neuter attaches to it an important element, a sense of a lifeless thing.

Feminine stems ending in a vowel which they lengthen in the nominative and accusative singular to express feminine gender, lengthen also the dative and locative case endings, as well as those of the genitive and ablative (9), showing that these case endings also are thought with attention directed to the substantive so as to take up its gender, the *ā* of *ai*, *ām*, *au*, being pronominal. The close implication of the case ending with the substantive stem is highly characteristic of these languages. Thus the plural case endings end in *s*, except the genitive and locative and some of the nominatives and accusatives, and this *s* is evidently expressive of the plural, so that the case relation affects not the plurality but the individual, and the individual as affected with that relation is pluralised. In the dative ablative plural the *i* is probably due to *y* assimilating to itself the vowel which precedes *b'*. In the instrumental dative ablative of dual, the *ā* is peculiar to the dual, and must be expressive of it, so that the first and strongest part, *ab'y*, of the compound case relation *ab'yam*, penetrates to the individual, and is followed by the dual prolongation of the vowel. This is like what is found in the Hyperborean languages of Europe and Asia.

12. The element of duality, *-i* or *-āu*, is similar to the element of locality *-i*, *-ām*, or *-āu*, and both involve a common element of thought, juxtaposition.

The dual *au* is doubtless akin to *dwa*, the stem of the second numeral (184). And the essential element of coupling in *dwa* is *u*, the *a* being the substance (Def. 4) of the couple.

It has been already said (11) that in the instrumental, dative, ablative, *ā* expresses duality (V. 51), and in the Veda *ā* occurs as the ending of the nominative dual instead of *au*, probably pronominal; but *u* added to *ā* expresses it more fully, just as in Arabic the element of the second numeral *n* is added to *ā* to express duality. The vowel *i* is itself significant of juxtaposition or proximity, as may be seen in the Sanskrit prepositions *ad'i*, *api*, *ab'i*, *pri*, *prati*. And in one application of this idea *i* might be a dual ending, while in another it is a locative ending, the dual requiring always its final vowel to be long or diphthong. In the locative of some of the pronouns it is strengthened with *n*, the ending being *-in*, which reminds of the preposition *in* *ēn*. Another locative ending appears in its full form *-swa* in the locative plural in Zend. In some old words of kindred *swa* or *χ'wa* appears as if it were a preposition signifying with, and akin

to *sam*, *χ'am*, which signify with; thus in Sanskrit *swag'ana cognatus*, *χ'waχ'ura socer*, Goth. *swaihra πειθερός*, Sanskrit *swasri soror*, Lat. *sobrinus*. From *swa* a locative ending *āu* might come, and from the other form, *sam*, might come another locative ending *-am*. For the case endings take the most essential element of roots which best express the relation with the nominal stem. And a pronominal *a* prefixed as in genitive and ablative would give *au* and *ām*.

Now, as in the dative dual, the duality is between two particles of relation; so in the locative dual of the *a*-stems, the locative *i* gets between the stem and the dual *o*, but needs to be confirmed by the addition of *s*, a fragment of *swa*. In Sanskrit the locative relation to a dual noun coincides with the genitive. In the locative plural the plurality *s* is similarly between the particles of relation, namely, the more general particle *i* and the more particular *swa*; but it destroys the locative expressiveness of *s*, and this has to be supplied by *wa* or *u*.

Bopp derives the Greek dative plural *-σι* from the Sanskrit locative *-isu*, but *ἰμῖν*, *ὑμῖν*, *σφίν*, *σφίσιν*, indicate a nasal, such as belonged to the Sanskrit dative, not only in the dual, but originally also in the singular (11); and it would be analogous to the dative dual to suppose that the original ending of the dative plural was *b'yasam*, the weight of which caused an abbreviation, and afterwards an obliteration of the second syllable with nouns; and the Latin dative *-bus* is from the Sanskrit dative. Bopp admits that the dative singular in Latin corresponds to the Sanskrit dative, though he strangely supposes the dative singular in Greek to be the Sanskrit locative.<sup>1</sup> But both are in Greek, as *δίζαι* = Sanskrit *v̄χ'ē* locative, *δίζω* = *v̄χ'āya* dative.

13. The ending of the genitive plural of the demonstrative pronouns is *-sām*, which corresponds to Latin *-rum*, and in the substantives it is *-nām* or *-ām*. In the first and second personal pronouns the ending is *-kam*, in which perhaps, as Bopp suggests, *k* is borrowed from a possessive formation, but it cannot be the neuter of such a formation as he conjectures.<sup>2</sup> If *k* is possessive in *-kam* then probably *s* is genitive in *-sām*, and *-ām* is plural, the *a* being lengthened by strong sense of plurality; the final *a* of masculine neuter demonstrative stems being changed to *ē*, seems to indicate *syām* (11, 156). This analysis of *-sām* may be confirmed by an analogy. The ordinals of the higher numbers are formed with *-ma* or *-tama*, expressing that special one of the number reckoned, which completes it as an aggregate (82). Also Sanskrit *īkatara* means one of two, *īkatama* means one of many, *-tar* being expressive of the step of transition from one to another in an alternative of two, as in *uter*, *alter*, &c., or in a relation of kinship, *-tam* expressing the step from many to one, in thinking which, the many are massed in an aggregate, which *m* expresses as in *ἰμοῦ*, *ἄμα*, &c., Skr. *sam* with, *sama* all whole. Another analogy is in Latin *multesimus*, one of many parts, a small fraction.

If this analysis of the ending of the genitive plural be correct, then in it too case has got inside number; the genitive element being

<sup>1</sup> Bopp. Vergl. Gram., sect. 177.

<sup>2</sup> Ibid. sect. 340.

reduced to *s* or *n*, and the reduction compensated by lengthening the final vowel of the stem, and the plural being *ām*.

14. In the nominative, vocative, and accusative plural of neuter stems the plural ending is *i*, and there is a tendency to lengthen the preceding syllable as if to increase the substance by massing into an aggregate rather than by noting the individuals.

It is to be observed that in some substantives and adjectives, masculine and feminine, the stem has a fuller form in the nominative, accusative, and vocative singular and dual, and in the nominative and vocative plural than in the other cases, because in these other cases thought is attracted from the stem by the stronger subjoined element so as to reduce the sense of life in the stem.

There is less distinction of case relations in the dual than in the plural, and in the plural than in the singular. For the relation is less distinctly thought when the transition is to different objects at the same time; and in the dual this cause of indistinctness is greater because the twofold individuality is fully thought, whereas in the plural the individuals are more merged in the plurality; in neither is the relation so distinct as with a single object.

It is to be observed that the nasal which expresses the accusative relation, *-m* singular, *-ns* plural, is in the plural preserved only with the masculine *-a*, *-i*, *-ī*, and *-u* stems; because the relation is more strongly thought with masculine nouns (143), and with these stems it is expressed only by *n*, with the other masculines by *a* for euphony.

15. The Sanskrit verb shows a remarkable sense of the process of the being or doing; for this is what the conjugational elements express. They are confined to the present parts of the verb, namely, the present tense, the potential, which is a potential present, the imperative, which is an imperative present, the imperfect or past present, and the present participle. These differ from the other parts of the verb in thinking the act or state as going on or in its process, and it must be this element variously thought according to the idea of the act or state, which the various conjugational formations express (III. 93). Now in about two-thirds of the primitive verbs of the language this element is taken up into the root, so as to suggest a comparison with the Syro-Arabian languages whose special characteristic is their expression of the process within the root. The difference, however, between these languages and Sanskrit is at once apparent when it is seen that the Sanskrit root takes up only an abstract sense of process which is partly expressed outside the roots affected with it, and that many verbal roots and forms in the language are not affected with it at all, whereas all the Syro-Arabian verbs take it up in all its fulness.

The form in which the process is for the most part taken up by the root in Sanskrit is Guna of the vowel of the root (2, compare IV. 108); but this cannot be applied if that vowel is *a*, or if it be followed by two concurrent consonants, or if it be a long vowel, unless it be final. In each of these cases Guna or incorporation of *a* would give excessive length, suggestive rather of quiescence than

of movement (3), but with a long final vowel this effect is escaped by the vowel turning into a semi-vowel before the *a* which follows.

The first conjugation is of those roots, about 1000 in number, which take Guna and subjoin *a*.

The second is of about 70, which take no conjugational element.

The third is of about 20, which reduplicate the initial consonant, using for it in the reduplication syllable the unaspirated consonant corresponding to it if it be an aspirate, and the corresponding palatal if it be a guttural ; but if the root begin with *s*, followed by another consonant, it is the second that is reduplicated ; the vowel of the reduplication syllable is the short vowel corresponding to that of the root ; *i* is used for *ri* and sometimes for *a*.

The fourth conjugation is of about 130 roots, which subjoin *ya*. Many roots form neuter verbs in the fourth conjugation, which in another conjugation form transitive verbs.

The fifth includes about 30, which subjoin *nu*.

The sixth includes about 140, which subjoin *a*.

The seventh includes about 24, which insert *n* before their final consonant.

The eighth includes about 10, which subjoin *u* ; 9 of them end *n* or *ṇ*.

The ninth is of about 52, which subjoin *nī*, or before vowels *n*.<sup>1</sup>

The tenth conjugation is that of several roots as verbs simply active, and of all causals. It Gunates the vowel of the root when not final, Vriddhies it when final, and generally when it is *a* between two consonants, and subjoins *aya*, before which *p* is inserted if the root ends in *ā*, or in *ī*, *ai*, *ē*, changeable to *ā*, and therefore incapable of Vriddhi ; other roots in *ai* also insert *p*, but most others in *ē* or *ō* insert *y*. This conjugation differs from all the others in this respect, that the affection of the root and the subjoined addition to it are not confined to the four conjugational parts of the verb, but are carried throughout it except in the precativè Parasmai and the aorist (27. 7), which drop *aya* ; the final *a*, however, of *aya* is dropped before the *i* which is taken in all the non-conjugational parts. It is a derived verb rather than a conjugation, and can be formed on any verb.<sup>2</sup> The *p* inserted after *ā* seems to belong to the causal element, being brought to light to preserve *ā* and *a* ; *paya* is perhaps akin to the root of *प्रीति*. The causation enters into the root, increasing its vowel unless when this would make its length excessive, as when that vowel is *a* followed by two consonants. When it produces Vriddhi it makes itself felt as dominating the root, which is passive to it.

16. The process which is expressed throughout the conjugational or present parts of the verb is the process of being or doing which the subject realised. In the third conjugation it is probably thought in its totality as the complete process of accomplishment, being expressed by reduplication. But there is another aspect of the succession of being or doing which gets expression in the Sanskrit verb ; this is the going on or process thought as of the life of the

<sup>1</sup> Williams, pp. 110, 111, 118-133.

<sup>2</sup> Ibid. pp. 121, 159.

subject, an idea of it more special to the subject than the former ; the one being the process which the subject realises, the other the process of the realisation. This last, however, is thought with sufficient strength for expression only when the subject is singular. The different subjectivities when the subject is dual or plural confuse and weaken the thought of it so as to suppress its expression, except in the first person of the imperative mood, in which the appeal to self maintains the energy of the person in the dual and plural as well as in the singular. In the second singular of the imperative the emphasis of address to the single person takes the place of the expression of the person and of the subjective energy. Moreover, it is only in the Parasmai or active that this subjective process is expressed. In the middle or passive there is not enough volition in the subject to maintain it, except in the imperative mood, in which the first person has it in all the voices.

Now, this subjective process can affect the root only when the person is in immediate contact with the root ; but it then Gunates the radical vowel, except in the seventh conjugation, in which it changes the *n* to *na*. Neither can it affect *a* immediately preceding the person (15), nor *ē*, nor *yā* of the potential, but it Gunates *nu* of the fifth conjugation and *u* of the eighth, changes *nī* or *n* of the ninth to *nī*, and it preserves final *ā* in the third conjugation, which, before the other persons, is dropped or shortened or reduced to *i*.<sup>1</sup> For sometimes when the radical vowel cannot be Gunated, being long by nature or position, the strengthening of the root appears in preserving it unmutated.<sup>2</sup>

17. When the conjugational *a* precedes *m*, *n*, or *v* of the first person, it is lengthened both in active and middle ; but the first singular imperfect active has short *a* before *m* in all the conjugations. This *a* belongs to the person, and expresses the consciousness of self, as in *aham*, I. The conjugational *a* is the process of what the verbal stem denotes, and it is dropped in the first singular imperfect, perhaps because in it the verb is more merged in the subject than in the other persons, being a remembrance of self alone. In the first singular of the present there is a strong sense of the process, and this is maintained in the first dual and plural of the present, and also of the imperfect, by the person or persons associated with self ; so that in all these persons the conjugational *a* is retained, as it is also in the first person of the imperative, on account of the strength with which the external fact is thought when made the aim of an imperative appeal. Now *a*, expressive of the consciousness of self, belongs properly to the first dual and plural as well as to the first singular ; but in the dual and plural it is not strong enough to make itself felt in expression as a distinct element, except in the imperative, in which it is expressed and lengthened in all the conjugations, numbers, and voices by the emphasis of hortatory appeal. In the other parts of the verb it is only when preceded by the conjugational *a* that it comes out as a lengthening of *a*. The potential intercepts this influence of *a* on the first person, by interposing its own formative element.

<sup>1</sup> Williams, pp. 110, 111, 130.

<sup>2</sup> Ibid. p. 123.

18. The potential element in those conjugations whose stem ends in  $a$ , is  $i$ , which combines with  $a$  and forms  $\bar{e}$ ; in the other conjugations it is  $y\bar{a}$ . It has been stated in 3 that  $i$ , as compared with  $a$ , is suggestive of weakness or absence of force. And accordingly the fourth conjugation in  $ya$  has generally a neuter significance. The potential expresses a weaker sense of realisation than the other parts, being only ideal, and it weakens the verbal process  $a$  by mingling with it  $i$ . The other conjugations subjoin  $y\bar{a}$ , increasing the effect of  $i$  by the long vowel (3), probably because their process is weaker, and consequently the thought of them as ideal is an element more remote from realisation than that which is proper to the  $a$ -conjugations. The first singular retains its  $a$  after the potential  $\bar{e}$ , on account of the subjective sense of self in an ideal being or doing of self alone, euphonic  $y$  being interposed,  $-\bar{e}yam$ ; but  $y\bar{a}$  swallows it.

19. The conjugational parts of the verb have each two sets of person endings, one for the Parasmai or active, the other for the Atmanē or middle. They are as on the opposite page,<sup>1</sup> those of the potential including the potential element.

This system of person endings suggests speculations explanatory of them, which for the most part can be regarded only as hypothetical.

The element of the first person in the singular and in the plural is  $m$ , but in the dual it is  $v$ . In the plural self is combined with a plurality, which is a less distinct element than the second personality associated with it in the dual, and therefore leaves the sense of self more distinct (14, Sect. V. 59, 60). Hence perhaps it is that the element of the first singular remains in the plural, but is lost in a less definite utterance in the dual. In the singular the consciousness of self being stronger than in the dual or plural is more apt, as has been said (17), to express itself by initial  $a$ , as may be seen in the imperfect and potential, but this does not appear in the present, in which  $mi$  has no  $a$  preceding it in the conjugations which do not subjoin  $a$  to the root. The cause is that the final  $i$  expressing the present engagement of the person expresses the consciousness of self, and leaves the latent  $a$  no stronger than it is in the dual or plural to make itself felt only in lengthening conjugational  $a$  (17).

The element of the second person in the singular and throughout the present of Parasmai has more breath than the third, because the thought of the second person involves more sense of its subjective life than the thought of the third; but this difference vanishes in the dual and plural of the potential imperative and imperfect of Parasmai, because in these the persons have less subjective life, being not actually engaged, and being thought with others. In Atmanē, however, the above difference between the element of the second person and that of the third prevails throughout, for in Atmanē the being or doing abides in the subject, and this causes the person to be thought with a fuller sense of its subjective life.

In the dual of the present of Parasmai there is a sense of the individuals expressed by  $s$ , and in the first plural this is maintained by

<sup>1</sup> Williams, pp. 105, 106.



Conjugations.	PARASMAI.						ATMANĒ.					
	Singular.			Dual.			Singular.			Dual.		
	1	2	3	1	2	3	1	2	3	1	2	3
Present.	<i>mī</i>	<i>sī</i>	<i>tī</i>	<i>vas</i>	<i>t'as</i>	<i>tas</i>	<i>mas</i>	<i>t'a</i>	<i>nti</i>	<i>i</i>	<i>sē</i>	<i>tē</i>
Others . .		<i>si</i>					<i>anti</i>			<i>ē</i>	<i>ṣē</i>	<i>ṭē</i>
Potential.	<i>iyam</i>	<i>is</i>	<i>it</i>	<i>iva</i>	<i>itām</i>	<i>itām</i>	<i>ima</i>	<i>itā</i>	<i>iyas</i>	<i>ivaḥi</i>	<i>igātām</i>	<i>igātām</i>
Others . .	<i>yām</i>	<i>yās</i>	<i>yāt</i>	<i>yāva</i>	<i>yātām</i>	<i>yātām</i>	<i>yāma</i>	<i>yāta</i>	<i>yus</i>			
Imperative.	<i>āni</i>		<i>tu</i>	<i>āva</i>	<i>tam</i>	<i>tām</i>	<i>āma</i>	<i>ta</i>	<i>ntu</i>	<i>ārahai</i>	<i>itām</i>	<i>itām</i>
Others . .		<i>hi</i>	<i>d'i</i>				<i>antu</i>	<i>atu</i>			<i>ātām</i>	<i>ātām</i>
Imperfect.	<i>am</i>	<i>s</i>	<i>t</i>	<i>va</i>	<i>tam</i>	<i>tām</i>	<i>ma</i>	<i>ta</i>	<i>n</i>	<i>vaḥi</i>	<i>itām</i>	<i>itām</i>
Others . .							<i>an</i>	<i>us</i>		<i>ātām</i>	<i>ātām</i>	<i>ātām</i>

the distinction between self and the associated individuals, but in the second plural it disappears, the plurality being expressed only by *a*, as significant of extension without a sense of the individuals; and in the third plural, which is thought less distinctly, this extension, like the plural in neuter nouns (14), enters into the person which is thought as an aggregate denoted by *n*, and becomes so objective that it has to be quickened by *i* as an element external to it. In the third conjugation the reduplication at the beginning causes an abbreviation at the end, and *n* is dropped in the present and imperative. The reduced sense of the individuals in the dual and plural person endings compared with what it is in dual and plural nouns and pronouns, arises from the subjective connection of the former with the verb, which weakens the thought of their objective element or substance (Def. 4, 14).

20. In Atmanē the person endings are relaxed with long vowels (3) and with a relaxed utterance of the consonants, because the being or doing is thought as abiding quiescent in the subject. In the first singular the *m*, which is especially liable to be vocalised by reason of its natural connection with *a* as mentioned above (11), melts away altogether, and in the present the vowels coalesce in *z̄*, which, uttered with the quiescence of a long vowel, takes the place of *i* of Parasmai, and is used in the dual and plural of the present as well as in the singular to express the quiescent engagement of the persons. In the first dual and plural of the present the *s* is relaxed to *h*, but in the second and third dual the sense of the individual substances which is in Parasmai is lost in Atmanē owing to the increased subjectivity and the consequent weakening of the substance, and the duality becomes an extension of the personality. This after the stronger process of the *-a* conjugations seems to retain more sense of duality than in the other conjugations, and is expressed in the former by *i*, which combines with the *a* into *z̄*, while in the latter it is mere extension *ā*. In the second plural the plurality enters into the person and gets a diffused expression as *ḍ'v*, both elements of which belong to the second person. And in the third plural the sense of a continuous aggregate which is expressed by *an* is so objective that it is weakened in Atmanē, and *a* is dropped when it is preceded by conjugational *a*, and *n* is dropped in the other conjugations.

21. The person endings singular of the potential and imperfect of Parasmai drop the *-i* of present engagement, and being thought with less distinctness than in the present, they have less sense of the individuals, dual and plural. The first person dual and plural drops *s* on account of the predominant sense of self, and the second and third dual are each massed together by *m*, there being more sense of the double substance in the more objective third person, and therefore more expression of extension in the long vowel. The third plural after dropping the *-i* of present engagement would become *ant*; but in the third conjugation which has the reduplication, and probably thinks the verb in the totality of its process (16), the person is still less subjective, the realisation being more complete, and the more objective plural *s* is taken, *an* reduced to *u*, and *ti* dropped. In all the conjugations the weak subjective realisation of the potential had

a similar effect, making the third plural in *-us* ; and sometimes optionally in the second conjugation, final  $\bar{a}$  of the root had the same effect in the imperfect,<sup>1</sup> by suppressing the *a* of the person and making the person more objective. But even without those influences, the stronger ending *-ant* dropped its *t* because two consonants are not tolerated at the end of a word.

22. The potential element in Atmanē is  $\bar{i}$ , which corresponds to its quiescent character and consequent love of long vowels ; after this  $\bar{i}$  the first singular has *a*, the *m* being dropped, but in the first dual and plural of the potential, and throughout the first person of the imperfect, the engagement of the subject, which in the present is  $\bar{i}$ , is reduced to *i*.

Even in the third singular potential and imperfect of Atmanē, there is an element of engagement of the subject due to the act or state being thought as abiding in the subject, and this is expressed by *a*. But in the more subjective second person this is taken into the person and more fully expressed in its own nature by  $\bar{a}$ , and in its abiding in the person by being included within a kind of reduplication of the person between *t'* and *s*, suggested perhaps by the thought of the person as subject and object.

The second and third dual potential and imperfect of Atmanē are each massed together by *m* as they are in Parasmai, but Atmanē, according to its nature, gives a long vowel to both of them, significant of the act or state abiding in them.

The potential also prefixes *iḡi* before both in all the conjugations ; whereas the imperfect, like the present, prefixes  $\bar{i}$  to them in the *-a* conjugations, and  $\bar{a}$  in the others.

The second plural potential and imperfect has a double expression as well as the second singular. The element *d'w* already involves plurality as appears from the present. But in the potential and imperfect the persons have less life than in the present, and consequently, the thought of them as object tends more than in the present to make itself felt along with the thought of them as subject, and in this aspect the plurality is thought again as an aggregate expressed by *m*.

The third plural, which in the imperfect changes  $\bar{e}$  of the present to *a*, in the potential puts *t* before *an*, and softens it to *r* under the influence of the vowels, thereby getting rid of a syllable from the form burdened with  $\bar{i}$ .

23. In the imperative the persons are objects of a command, and this diminishes the sense of their intrinsic life. The first singular after the appeal to conscious self expressed by  $\bar{a}$  is weakened to *ni*. The second singular in the *a* conjugations is overpowered by the energy of the commanded process *a* ; in the other conjugations it is weakened to *hi* or *d'i*. The third person both in the singular and plural receives force, expressed by *u*, rather than gives it (V. 54) ; *-tāt*, which, like *-t'ās*, is quiescent and object as well as subject (see above), is sometimes substituted for *-hi* and *-tu*, and even for *-ta* to imply benediction, chiefly in the Vedas.

<sup>1</sup> Bopp, Verbl. Gram., sect. 462.

In Atmanē the engagement of the first person in all numbers of the imperative is expressed by the inactivity of Vriddhi. The second singular has its element *s* weakened by combination with the other element *w*, which encroaches on it and relaxes it, but its engagement has a sense of life, which, like that of third singular imperfect, is expressed by *a*. The second plural and the second and third dual are the same as in the imperfect ; but the third singular and plural both end in *-ām*, which seems to express passive submission to the abiding realisation of what is ordered.

The imperfect has the augment *a-*, which with an initial vowel forms Vriddhi. It probably expresses the remotion of the past.

24. There is also a perfect, which is reduplicated like the third conjugation if it begin with a consonant, and if not by doubling the initial vowel ; and this tense does not belong to the conjugational parts of the verb. It is formed as the following from *ṽid*, cleave :

Person.	Singular.	Dual.	Plural.
1.	<i>biṽēda</i>	<i>biṽidra</i>	<i>biṽidima</i>
2.	<i>biṽēdit' a</i>	<i>biṽidat' us</i>	<i>biṽida</i>
3.	<i>biṽēda</i>	<i>biṽidatus</i>	<i>biṽidus.</i>

If the root end in a vowel this vowel takes Guna in the second singular, Vriddhi in the first and third singular.

The Guna or Vriddhi in the singular is the complete subjective accomplishment, not expressed in dual or plural, because the subjectivity is less distinct in them (16, 157). When the radical vowel is *a* between single consonants it may be lengthened in the first singular and must be in the third singular, and in the other persons it may be changed to *ē* and the reduplication dropped,<sup>1</sup> as if the initial of the root was vocalised away and the confluent *a* was eased to *ē*. The *a* of the perfect is what is past and over, taken up by the singular persons and by the first dual and plural, whose engagement is most strongly thought, but subjoined to the root in the other persons ; but the first singular *biṽēdima*, third singular *biṽēdita*, and second plural *biṽidat' a*, have given up the consonant of the person weakened by the sense of completion and the cessation of the process, and *a* has overpowered the merely connective *i* ; also the sense of completion has made the third plural less subjective, so that the person ending is *-us*, as in the potential and imperfect of the third conjugation (21) ; the second and third dual are a close form of the present persons. And in Atmanē the persons are those of the present with or without *i* to connect them to the reduplicated stem unaffected with Guna.

25. In the formation of most of the non-conjugational parts of the verb, a few roots ending in vowels, and all roots ending in consonants, except a number of these, amounting to one hundred and three, take *i* before the initial consonant of the added element.<sup>2</sup> The roots which require this *i* are perhaps those which are not thought verbally enough to coalesce immediately with the thought of the added element, but require a light thought of verbal succession to be added to them to

<sup>1</sup> Williams, pp. 134, 137.

<sup>2</sup> Ibid. pp. 140, 141.

enable them to take up that element (V. 48). Such a thought finds ready expression in *i* between two consonants whose utterance is facilitated by *i*; but it needs to be more strongly thought to get expression after a vowel.

Those roots which do not take *i* before the above elements may optionally reject it also in the perfect before the second singular person ending.<sup>1</sup>

Causal stems take *i* probably because the idea is too heavy to coalesce readily with the added element.

26. There is a future formed by uniting the nominative case of the noun of the agent in *-tṛi* with the present of the verb *asmi*, to be, both in Parasmai and Atmanē. The third person singular, dual, and plural is the nominative of the noun in these numbers. The noun in this formation gets the sense of a future participle which otherwise it never has. Nor is there in Sanskrit any future participle with which the stem of this tense can be identified;<sup>2</sup> but it shows the affinity between the noun of the agent and the Latin participle in *-urus*.

There is another future formed by annexing *-sya* to the root and using the present person endings. This *-sya* seems to have a significance similar to *-sya* of the genitive (9).

In both futures the root is Gunated through all the persons, subject to the restrictions mentioned in 15, and except in certain uncommon roots of the sixth conjugation,<sup>3</sup> being strengthened with the thought of future accomplishment.

27. Besides the imperfect and the perfect there is an aorist which has seven different forms, all of which take the augment and the imperfect person endings, the third plural being *-us*, unless the tense element ends in *a*.

(1.) The fullest form subjoins *-sis* to the root. Many roots ending in *-ā*, *-ē*, *-ī*, and *-ai*, with three in *-am*, take this form in Parasmai; *-ē*, *-ō*, and *-ai* being changed to *-ā*, and *m* as usual to a nasalisation. In Atmanē these roots follow the next formation.

(2.) A more usual form is *-s*, the radical vowel taking Vriddhi in Parasmai before all the terminations, but remaining unchanged in Atmanē unless it be final *i*, *ī*, *u*, or *ū*, when it takes Guna. In the second and third singular *i* is inserted after *s* to preserve tense and person, *-sis*, *-sit*.

(3.) Those roots which take *i* before the non-conjugational forms have in the second and third singular *-īs*, *-īt* instead of *-isis*, *-isit*. They also Gunate the radical vowel as in the future, both in Parasmai and Atmanē, unless it be final, when it takes Vriddhi in Parasmai, Guna in Atmanē. These roots are thought less verbally, and therefore take *-i* (25). The idea of them consequently differs little in Parasmai and Atmanē, so that in both they take up a sense of the past, which expresses itself by Guna, unless the vowel is final; this in its significance is probably akin to the sense of remotion expressed by *a* of the augment. If the vowel is final, it takes up in Parasmai, as the mind is passing to the verbal *i*, the sense of cessation more proper

<sup>1</sup> Williams, p. 141.

<sup>2</sup> Bopp, Gram. Sans., sect. 460.

<sup>3</sup> Williams, p. 140.

to past activity in Parasmai, and is Vriddhi. But those roots which do not take *-i*, and which form the aorist according to 2, are thought more verbally with a sense of activity in Parasmai and of quiescence in Atmanē. These are differently affected by the past; for the past as affecting activity gives a sense of cessation or quiescence whose natural expression is Vriddhi (3); but the past does not thus affect Atmanē, which even in the present is thought with a degree of quiescence. The association of quiescence, however, with this form weakens in it the sense of remotion; but just as thought is passing to the tense element it takes up in Atmanē a sense of remotion sufficient to Gunate a final vowel.

(4.) Another form is *-sa*, subjoined to the root; but this is taken only by certain roots ending in *-χ'*, *-s*, or *h*, preceded by *i*, *u*, or *ṛi*, and the final consonant is changed to *k* before the aorist element.

(5.) More usual is *-a* subjoined to the root. In this form and the preceding *a* is dropped before first singular *-am*; for the past is involved as a memory in the consciousness of self; but in first person dual and plural *a* of the past and *a* of self-consciousness are both retained in *ā* (17).

(6.) Another form is the mere root with the person endings of the imperfect.

(7.) A few primitive verbs and all causals reduplicate and subjoin *-a* to the root.<sup>1</sup>

It appears from the above that only the second and third forms have Guna or Vriddhi; as if in these only the root took up in part the element of the past. Such an absorption into the root corresponds to the abbreviation in these forms of the tense element, which in its full form is *-sis*, but is in these reduced to *-s*.

There is a similar reduction of the tense element in the fifth form compared with the fourth, and yet no compensation for it by Guna or Vriddhi. But in this case the expression of the past, which is *a*, is in both forms, the *s* being a mere abstract element of fact. In the other case it is the expression of the past which is given up, namely, the reduplication of *s*.<sup>2</sup>

This *s* is probably akin to the *s* of the future and of the genitive, expressing in this application of it an abstract sense of fact as an issuing into realisation. Perhaps it is the same *s* which marks the subject, for it is in the subject that fact issues into realisation. And the same element might denote plurality as increase of number (9). *S* has a significance of this kind in the Sanskrit root, *su parere*, whence; *sūnus viś*, son (87).

28. A benedictive or precativè is formed by subjoining, in Parasmai, *-yās* to the root unchanged and without *-i*, and in Atmanē by subjoining *-īyās* to the root which is Gunated, if it be one of those which take *-i* (25); some roots ending in a vowel are Gunated in Atmanē, though they do not take *-i*. The person endings are those of the imperfect, the second and third singular Parasmai being *-yās*, *-yāt*; and in Atmanē the second and third dual being *-īyāst'ām*,

<sup>1</sup> Williams, p. 147-152.

<sup>2</sup> Ibid. pp. 108, 152, 153.

-*ṣīyāstām*, the second and third singular *ṣīst'ās*, -*ṣīstā*, the first singular -*ṣīya*; the other persons reducing -*ṣīyās* to -*ṣī*, and third plural being -*ṣīran*, like the potential.

The precative element is to a remarkable degree stronger in Atmanē than in Parasmai, as if the force of prayer in urging the accomplishment was less felt the more activity there was in the subject, and the more the accomplishment was thought in consequence as determined by the energy of the subject. The being or doing of the subject is thought in the precative element as the matter of the prayer, it is expressed in that element precatively. The formative element of the desiderative verb, presently to be described, is *ṣ*, which seems to be akin to the Sanskrit verb *iṣ* desiderare; and not very remote from this is *yāks* poscere. Like this is the Parasmai precative element, and like this, strengthened with *ṣ*, the Atmanē. The accomplishment or root is thought in Parasmai unaffected by the urgency of prayer with any change which needs expression; and even in Atmanē those roots which are thought so verbally as to coalesce directly with the verbal formative elements are for the most part thought precatively without any change in their idea which needs expression, but the other roots are so affected by it as to be strengthened with Guna. Some also ending in vowels take Guna though they do not take *i*, the mind catching the urgency of prayer as it passes to the precative element, and this being felt as a change in the radical idea which expresses itself in Guna as it is a vowel that is then being uttered.

A conditional is expressed as past of future by giving to the future in -*ṣya* the imperfect person endings, and prefixing the augment.<sup>1</sup>

29. The infinitive is the accusative of a verbal noun in -*tu*, the root being affected as in the future in -*tāsmi*, so that if -*tā* in the third singular of the latter be changed to -*tum*, it gives the infinitive.<sup>2</sup>

30. The derived verbs in Sanskrit are the passive, the causal, the desiderative, and the intensive.

The passive is formed by subjoining -*ya* to the root, and is conjugated as an Atmanē verb of the fourth conjugation.

It is, however, not very commonly used, except in the third singular and plural present and imperative. For although a passive construction is exceedingly common in Sanskrit syntax, yet almost all the tenses of the passive verb are expressed by participles.<sup>2</sup>

The passive element *ya* seems to be akin to the neuter element *ya* of the fourth conjugation and to the potential element; at least so far as that there is in all of these a reduction of force in the succession of the being or doing (15, 18). Or does *ya* of the passive express a sense of motion to, the subject being recipient of what comes to it?

Before the passive element six roots in -*ā*, and one or two in *ā*, *ai*, and *ō*, change their final vowel or diphthong to *ī*, as if they took up the passivity, and final *i* and *u* are lengthened as involving a sense of quiescence. In the non-conjugational parts, except the perfect, all roots ending in a vowel may Vriddhi the vowel and subjoin -*i*, or may use the regular Atmanē form. In the former case the mind, in passing

<sup>1</sup> Williams, p. 153.

<sup>2</sup> Ibid. p. 154.

to the quiescent subject, catches such a sense of the passivity as affects the radical idea and expresses itself by Vriddhi (3) in the vowel which is being uttered, as well as by -i, which is a trace of the passive element subjoined to it.

In the third singular of the aorist (27), the termination -iṣṭa, -sta, is dropped, and -i is taken instead, a final vowel of the root being Vriddhi, and if the root end in a consonant the radical vowel being either Gunated, or if it be *a* lengthened.<sup>1</sup>

The sense of the subject is not strong enough in the Sanskrit passive to maintain the weakest person in the past tense, and the Atmanē quiescence being thus unexpressed, a trace of the passive is expressed by -i, and there is a tendency to affect the root with long vowels.

31. Causal verbs are formed from every root, and conjugated, as has been described (15), for the tenth conjugation. In the passive of causals, the element -aya is dropped in the conjugational parts, and optionally in the non-conjugational, but the causal changes of the root are retained throughout.<sup>2</sup>

32. Every root in the ten conjugations may take a desiderative form by reduplicating its initial, subjoining *ṣ* and in the conjugational parts adding *a*, *i* being inserted before *ṣ* if the root takes *i* (25). And although this form rarely appears as a verb, yet nouns and participles derived from it are not uncommon. There are certain desiderative verbs which in use have condensed their meaning into a simple idea. Desideratives of Atmanē verbs are themselves Atmanē.<sup>3</sup> Causals retain -ay, and take *i* in forming a desiderative.

When a root takes *i* before the desiderative element, the radical vowel may in general be optionally Gunated, a separate emphasis affecting the thought of the root as the desired accomplishment; when it does not take *i*, and ends in vowels, these are changed, *i* and *u* to *ī* and *ū*, *ē*, *ai*, and *ō* to *ā*, *ṛi* and *ṛū* to *īṛ*, or after a labial to *ūr*,<sup>4</sup> the mind as it passes to the element of desire dwelling on the thought of the desired accomplishment so as to increase the vowel which is then being uttered. The desideratives, as involving a heavy idea, take *i* in all the non-conjugational parts except the precative of Parasmai to connect the desiderative stem with the added element;<sup>5</sup> euphony requires *i* in the precative of Atmanē.

Causals may take a desiderative form, as from *pat* fall, *pātayāmi* I cause to fall, *pīpātayīṣāmi* I desire to cause to fall; and desideratives may sometimes take a causal form, as *div* play, *dudyūṣāmi* I desire to play, *dudyūṣayāmi* I cause to desire to play.<sup>6</sup>

33. Every root may take an intensive form; which, however, is even less used than the desiderative. In the present participle, and in a few nouns, it may sometimes appear. It either expresses repetition, or gives intensity to the radical idea.<sup>7</sup>

There are Atmanē intensives and Parasmai intensives. Both are formed with reduplication of the initial and Guna of the reduplicated vowel, whether it be long or short; but the Atmanē intensive is

<sup>1</sup> Williams, p. 155-158.

<sup>2</sup> Ibid. pp. 158, 160.

<sup>3</sup> Ibid. p. 163.

<sup>4</sup> Ibid. p. 164.

<sup>5</sup> Ibid. p. 165.

<sup>6</sup> Ibid. pp. 163, 165.

<sup>7</sup> Ibid. p. 165.



formed from the passive stem, the Parasmai from the root. In the former also, if the vowel of the passive stem be *a*, it is lengthened in the reduplication syllable; and if the passive stem contain *ri*, this becomes *rī* in the intensive; if it have a nasal after *a*, this nasal is frequently repeated in the reduplication syllable. In the non-conjugational parts the Atmanē intensives drop *ya* of the passive stem and take *i*; they retain *y* for euphony between two vowels.

The Parasmai intensives take the subjective Guna of 16, and Guna in the singular of the perfect. In the non-conjugational parts except the precativ they take *i*<sup>1</sup> (25).

Sometimes a nasal is taken in the reduplication syllable though there be none in the root.<sup>2</sup>

An intensive Atmanē or middle strengthens both parts of the idea, the subject realising the accomplishment and receiving or experiencing it. The latter, when strengthened, expresses itself in the passive form; the former gets expression rather in the Guna reduplication syllable; and the whole formation is usually deponent in meaning.<sup>3</sup>

Intensive verbs are said to be capable of causal desiderative forms, as *tud* strike, *tōtud* strike often, *tōtudaṃmi* I cause to strike often, *tōtudiṣāmi* I desire to strike often, *tōtudaṃiṣāmi* I desire to cause to strike often. But Bopp says that derived forms of intensives are nowhere to be found.<sup>4</sup>

34. Verbs are formed from nouns by subjoining to the stem of the noun *-a*, with Guna of a final vowel if capable of it, and lengthening of a vowel before a final nasal; these express action defined by the noun. They are formed also by subjoining to the nominal stem *-ya* expressive of wish or desire (compare Sanskrit *ī* to desire, *ῑ* to desire); it is taken up by a final vowel, so that final *a* or *ā* becomes *ī*, final *i* or *u* is lengthened, final *ri* becomes *rī*, and final *n* is dropped; also by subjoining *-aya* or *-ya* causative or active, a final vowel being dropped before *-aya*; and if the nominal stem have more than one syllable, and end in a consonant, the consonant and the preceding vowel being dropped; *p* is sometimes inserted before *-aya*, especially if the stem be monosyllabic and end in *a*, and before *p* Vriddhi is required; if the stem be monosyllabic, and end in a consonant, it may take Guna before *-aya*. They are formed also by subjoining *-sya*, *-asya*, or *kāmya*, expressive of desire; *kam* means to love or desire.<sup>5</sup>

35. Present participle Parasmai is formed by *-t* or *-at*, for *-nt*, *-ant*, being applied just as if substituted for *-nti*, *-anti* in third plural present.

The present participle Atmanē is formed by *-māna*, as if substituted for *-ntī*, by *-āna*, as if for *-atī* of third plural present.<sup>6</sup> Future participles Parasmai and Atmanē are formed like the present, from the future in *-sya*.<sup>7</sup>

The nasals in the present participles, by virtue of their uninterrupted breathing, give a sense of going on, which in Parasmai com-

<sup>1</sup> Williams, p. 166-168.

<sup>2</sup> Ibid. sect. 760.

<sup>3</sup> Williams, p. 163-170.

<sup>4</sup> Bopp, Vergl. Gram., sect. 756.

<sup>5</sup> Bopp, Gram. Sans., sect. 580.

<sup>6</sup> Ibid. pp. 170, 171.

<sup>7</sup> Ibid. p. 182.

bins with an element of realised fact *t* to express fact as in process, but in Atmanē is repeated to give a sense of its abiding.

The past passive participle is formed generally by adding *-ta* to the root, expressive of realisation complete (8), but if the root end in *y̐*, then by adding *-na*, expressive of quiescence.

Some roots ending in long vowels, and some ending in consonants, and not inserting *i*, form it in *-na*; roots ending in vowels do not insert *i* before *-ta* or *-na*, though they may take it in the futures; but in many cases the final vowel of the root is changed, and roots ending in *m* or *n* reject those nasals before *ta*; roots ending in consonants take *i* before *ta*, or do not take it, according as they do generally in the non-conjugational parts.

In this participle of causals *-aya-* is dropped, but *-i* is taken; *-i* is taken also before *ta* by desideratives.

This participle is also sometimes formed from nouns by adding *-ita*, as if the word was the participle of a denominative verb in *-aya*; sometimes *-ina* takes the place of *-ita*.<sup>1</sup>

Past active participles are derived from past passive participles by adding *-vat* to the stem of the latter.<sup>2</sup> This is the formative of possessive adjectives, and its full form is *-vant*, as appears from the declension; *-vant*, *-vat*, *-vas* probably express possession as increase; Sanskrit, *tūcat tantus, vasu res divitiæ*; Latin, *-osus*.

The perfect participle active is formed from the stem of that tense, as it is in the dual and plural by adding *-vas* when that stem contains more than one syllable, *-ivas* when it consists of one syllable only; the *s* becomes *t* before an initial consonant of case ending.

A perfect participle Atmanē is formed by adding *-āna* to the stem of the perfect dual and plural.<sup>3</sup>

36. Gerunds are formed by adding *-twā* to uncompound roots, *-ya* to roots compounded with prepositions or other adverbial prefixes. Bopp considered *-twā* to be the instrumental case of an affix *-tu*, of which the infinitive affix *-tum* is the accusative. It has been remarked that the form of the root in these two formations often differs considerably, as from *val'* are formed *vaktum*, *uktwā*; <sup>4</sup> and this prevents the two formations from being regarded as different cases of the same noun, but it need not prevent the two affixes from being so regarded. *Yu* is a weaker affix corresponding to the compound nature of the verbal stem, for this would make the action or state which the stem denotes less distinctly thought as object of a relation, and the relation itself less precise. Accordingly, whereas *twā* is a case of *tu* which stands for the object of the relation, *ya* has no such stem, except after a short vowel, when it has *t*; and whereas the former is an instrumental case, the latter seems to be a dative case ending, which expresses a relation more abstract and general.

An accusative gerund is formed by adding *-am* to the root, which is so strengthened with a sense of fact as object, that the radical vowel takes the same changes as in the causal formation.<sup>5</sup> Roots which

<sup>1</sup> Williams, p. 172-176.

<sup>2</sup> Ibid. p. 176.

<sup>3</sup> Ibid. pp. 176, 177.

<sup>4</sup> Ibid. p. 117.

<sup>5</sup> Ibid. p. 179.

begin with a vowel long by nature or position, except *āp*, *āṅk*, and roots having an initial *a* before two consonants, and all roots of more than one syllable, except *ūrm*, form their perfect by taking *ām*, followed by the perfect of an auxiliary verb.<sup>1</sup>

37. Future passive participles or participial adjectives are formed by affixing *-tavya*, *-anīya*, or *-ya*, to the Gunated root; *tav* seems to be the verbal element *tu* Gunated; *anī* seems to be akin to the Atmanē participial ending *āna*; and *y* seems to be akin to the dative ending. These formations commonly denote obligation, propriety, or fitness, to be treated as the root denotes, and sometimes correspond to Latin *-bilis*.<sup>2</sup>

38. There are a great many prepositions in Sanskrit, but they are generally found as inseparable prefixes qualifying the sense of roots, and the nouns and verbs derived from roots. Only three are commonly used in government with nouns, *ā* as far as, *prati* at, to, *anu* after; and of these the two last are rarely so used except as postpositions; *ā* is generally not separated from the word which it governs.

Conjugations are few, and those which are most used follow words as enclitics. These are *k'a* and, *ta'ā* so, *hi* for, *vā* or, *tu* but.<sup>3</sup>

39. One of the most striking features of Sanskrit is its tendency to run together the words of a sentence, and to throw members of a sentence into compounds. All the parts of a sentence tend to join each to the following one, so that the final letter of one is affected by the initial of the other. And compounds are formed of two or more words connected by concord or government, or as by copulative conjunction, all of which but the last are mere stems, making nouns or adjectives which are inflected as such. The copulative compounds take a dual ending when they denote two animate objects, and a plural ending when they denote more than two, but when they denote two or more inanimate objects they may be neuter singular.<sup>4</sup>

Complex compounds involving concord and government and copulation all together, or two of these, and consisting of four, five, or even six words, occur commonly in the best specimens of Sanskrit, and in the simplest prose writings, for the most part as adjectives. Sometimes the last member of a compound changes its final syllable; for this no longer expresses its substance but that of the compound. The most common substitution is that of *a* for the final vowel or final consonant and preceding vowel of a word.<sup>5</sup>

40. The prepositions, though not usually thought with full distinctness as relative elements involving a simultaneous sense of the antecedent and the consequent, and in transition from the former to the latter, are greatly used in combination with the antecedent in forming compound verbs, which pass to their object through the prepositional element, or with the consequent in forming compound adverbs, which consist of a preposition and a substantive governed by it, and often preceding it in the stem form. Prepositions in compound verbs may also qualify them adverbially.

<sup>1</sup> Williams, p. 139.

<sup>2</sup> Ibid. p. 180.

<sup>3</sup> Ibid. pp. 271, 272.

<sup>4</sup> Ibid. p. 273-287.

<sup>5</sup> Ibid. p. 288-291.

Compound verbs are also formed by adverbs or the stems of nouns used adverbially prefixed to the roots *kṛi*, to make, and *ḅū*, to become; but these scarcely occur except as passive participles. The compound verbs, formed with prepositions, are of more frequent occurrence than simple verbs; and a very small proportion of Sanskrit roots are in common use at all as verbs. Those that are so appear in a multitude of different forms with one or two or even three prepositions prefixed, the remainder being used principally in the formations of nouns. In the compound verbs the augment and the reduplication are inserted between the preposition and the root.<sup>1</sup>

From roots compounded with prepositions nouns also are formed in great abundance.<sup>2</sup>

41. Now with regard to all these compounds, the question arises, whether thought spreads through the components retaining the earlier ones while the succeeding ones are being thought, or only mingles each with that which follows, as it passes from one to the other, leaving the preceding element when it has passed to the succeeding? That the latter is the nature of the mental action appears plainly from the account of those compounds which has been given above. For the compound members of a sentence show only a higher degree of that mutual approximation of parts which takes place throughout the sentence, and in which the mind passes from part to part, almost mingling them as it passes. And that the compound verbs are loose and open in their structure, with little mingling of their parts, appears from their insertion between these of the augment and reduplication.

42. There is no indefinite article in classical Sanskrit.<sup>3</sup> The definite article is not unfrequently expressed by the pronoun *sa*.<sup>4</sup>

The verb agrees with the nominative case in number and person; the adjective participle or adjective pronoun with the substantive in gender, number, and case, the relative with the antecedent in gender, number, and person.<sup>4</sup>

The copula is very often omitted.<sup>4</sup>

The verb is usually, though not always, placed last in the sentence.<sup>4</sup>

Nothing is more common in Sanskrit syntax than for the verb to be omitted altogether or supplied from the context.<sup>5</sup>

Causal verbs, with two objects, govern both in the accusative.<sup>6</sup>

The genitive in Sanskrit is constantly used for the dative, locative, or even accusative. It is more especially used for the dative, so that almost all verbs may take a genitive as well as dative of the object to which anything is imparted.<sup>7</sup> The aim or ultimate object of the action is here thought as its motive or origin.

"The prevalence of a passive construction is the most remarkable feature in the syntax of this language. Passive verbs are joined with the agent, instrument, or cause in the instrumental case, and agree with the object in number and person."<sup>8</sup> The passive participle usually takes the place of the past tenses of the passive verb.<sup>8</sup>

<sup>1</sup> Williams, p. 292-297.

<sup>2</sup> Ibid. p. 292.

<sup>3</sup> Ibid. p. 298.

<sup>4</sup> Ibid. p. 299.

<sup>5</sup> Ibid. p. 308.

<sup>6</sup> Ibid. p. 310.

<sup>7</sup> Ibid. p. 312.

<sup>8</sup> Ibid. p. 314.

The Sanskrit infinitive is used like the Latin supine.<sup>1</sup>

The distinction of tenses has evidently diminished in Sanskrit since the various tense formations came into existence. Bopp says that the past tenses and also the future are used so indifferently that he distinguishes them not by their meaning but merely by their form.<sup>2</sup> Williams says that the reduplicated preterite or perfect is said to express a past of some definite period, but may also be used as an aorist.<sup>3</sup> The thought of completion might pass into the former use as defining the point from which to measure the past up to the present.

Participles in Sanskrit often discharge the functions of the tenses, constantly of the past and future.<sup>4</sup>

The sparing use made in Sanskrit of relative pronouns, conjunctions, and connective particles is compensated by the use of the gerunds, by means of which the sense of a clause may be suspended, and sentence after sentence strung together without the aid of a single copulative. Some of the chief peculiarities of Sanskrit syntax are to be traced to the frequency of their occurrence.<sup>5</sup>

43. Examples, of which 1-13 are a story from the Hitopadēḥa :<sup>6</sup>

be 3d sing. gen. sage gen. penance grove loc.  
(1.) *As · ti Gautama · sya mun · ūs tapō · van · ē Mahātapā*  
by name sage

*nāma munih*, (there) is in the penance-grove of the sage Gautama a sage named Mahātapās; *tapōvanē* is a compound of the stem *tapas* and *vana*, whose locative is *tapōvanē*; *as* blends into *ō* before the soft consonant *v*; *nāma* is an adverb; *-h* is the *visarga* or breathing to

which *s* is reduced at the end of a sentence. (2.) *Te · na aḥṛama-*  
neighbourhood loc. mouse young crow mouth abl. fall past part. see  
*sannidān · ē mūṣikaḥāvakah kākamukā · d bṛas · tō dṛis-*  
past part.

*ṭah*, by him in the neighbourhood of the hermitage a young of a mouse fallen from the beak of a crow was seen; the two *a*'s coalesce in *tenāḥramasannidānē*; *sannidānam* is a compound noun formed with *-na* (3), from *sam* with, *nī* down, *dā* put; *bṛasṭō* is nominative singular masculine past participle of *bṛāḥ* to fall, *-as* changed to *-ō* (2); *dṛisṭah* for *dṛisṭas*, *-s* changed to the breathing *visarga* at the end

of a sentence (2). (3.) *Tatō dayā · yuk · tēna tēna muni · nū*  
wild rice grain instr. pl. rear past part.

*nivāraṇa · aiḥ sanvādā · i · ṭah*, then by that sage, touched with

compassion, with grains of wild rice (it was) reared. (4.) *Tad · an-*  
interval accus. mouse accus. eat infin. after run pres. part. cat nom. sing. sage  
*antar · ā mūṣikā kādri · tum anudāv · an vidātō muni-*  
instr. see past part.

*nū dṛis · ṭah*, soon after this a cat was seen by the sage running

after the mouse to eat it; *vidātō* for *vidātas*. (5.) *Tā mūṣikā*

<sup>1</sup> Williams, p. 315.

<sup>2</sup> Williams, p. 102.

<sup>3</sup> Bopp, Vergl. Gram., sect. 428.

<sup>4</sup> Ibid. p. 319.

<sup>5</sup> Ibid. p. 321.

<sup>6</sup> Ibid. p. 323.

afraid accus. to see ger. devotion efficacy abl. the instr. sage mouse nom.

*b'itam ā lōk'ya tapah'pra · b'āv · āt tē · na muni'nā mūṣikō*

strong super. nom. cat made

*bal'isfō vidātō kṛitah*, on perceiving the mouse afraid, from the efficacy of devotion by the sage, the mouse was made a very

strong cat; *ālōk* compound verbal stem. (6.) *Sa vidālah kukkur · ād*

fear 3d sing. then dog made dog gen. tiger abl. great

*bib'ē · ti, tatō kukkurah kṛitah, kukkura · sya vyag'r · ān mahad*

fear that neg. interval accus. it tiger nom. made

*b'ayā tad · an · antar · ā sa vyāg'rah kṛitah*, the cat fears the dog,

then (it was) made a dog; the dog has great fear of the tiger, then

immediately it was made a tiger; *vidalah* *s* becomes the breathing

before *k* (2); *kukkuraḥ* for *kukkuraḥ* before *b* (2); *bib'ēti* third singular

present of *bī* third conjugation, *vyag'rān* for *vyagrāt* before *m*.

now tiger accus. even mouse not difference regard 3d sing.

(7.) *At'a vyāg'ra · m api mūṣika · nir · viḥ'ēsā paḥ' · ya · ti*

sage

*muniḥ*, now the sage regards even the tiger no different from mouse;

*mūṣikanirviḥēsā* is a compound of the stem *mūṣika*, and *nirviḥ'ēsā*,

which is compounded of *nīs* without, and *viḥ'ēsā* difference, which is

a nominal stem from *vi* apart, and *viḥ'ēsā* distinguish, the whole com-

pound being an adjective accusative masculine agreeing with *vyāgram*,

or an adverbial accusative neuter; *paḥ'yati* is third singular present

of *paḥ'* fourth conjugation. (8.) *Atah sarvē ta'tra'st'ā g'anā · s tā*

tiger accus. see ger. say 3d pl.

*vyāg'r · ā dṛis'tvā val'anti*, then all the persons residing there on

seeing the tiger say; *atas* an adverb formed from *a* by the termina-

tion *-tas* with, from; *tatra* adverb of place from *ta*; *st'ās* drops *s* of

this instr. sage instr. mouse this tiger- hood

the plural by 2. (9.) *Anēna muni · nā mūṣikō yā vyag'ra · tā*

bring past part.

*nā · taḥ*, by this sage this mouse is brought to the condition of a

tiger; *yā* is for *ayam* (2); *vyāg'ratā* is a derivative like *purusatā*

this hear ger. the tiger uneasy think 3d sing. imperf.

(3.) (10.) *ētak' k'rutvā sa vyāg'rah savyat'as k'intayat*, on

hearing this the tiger uneasy thought; *ētak* is for *ētat* (2), neuter

of *ēsas*; *sas* *vyāg'ras* *savyat'as* *ak'intayat* changed according to 2;

*savyat'* is compounded of *sa* with, and *vyat'* troubled; *k'int* is of

as long this instr. sage instr. live so long

tenth conjugation. (11.) *Yāvad anēna muni · nā g'vī'tarya tāvad*

this 1st pers. gen. self form story neut. disgrace 'making not flee fut.

*idā mama siva rūp · āk'yānam a · kīrti · karā na palāy · i'sya*

3d sing. Atm.

*tē*, as long as (it is) to be lived by this sage, so long this

disgraceful original-form-story of me will not pass away; *g'vī'tavya*

(37); *āk'yānam* is from *ā* to, and *k'ya* speak; *kīrti* means glory,

thus with to look ger. sage kill infin. with up take

*akīrti* disgrace. (12.) *Iti sam · ā · lōk · ya munī han · tū sam · ud · ya*

past part.

*tāh*, on thus reflecting he was taken up with killing the sage.

sage nom. he gen. do desid. part. know ger. again mouse become

(13.) *Muni · s ta · sya k'ikīr'sitā g'n'ā · tvā punar mūṣikō b'ava*

thus say ger. mouse indeed make past part.

*ity uk'twā māsika ēva kṛi · ta*, the sage on knowing his intention on saying thus become mouse again, mouse it was made indeed; *k'ikīrsitam* is the accusative singular past passive participle of the desiderative of *kṛi* to do; *ūava* is second singular imperative

of *ū*; *uk'twā* is gerund of *vak'* say. (14.) *Asmā · ūir ēka'tra st'i*  
pass. 3d sing. imper. <sup>us instr. one stand</sup>

*ya · tū*, let it be stood by us in one place, for let us stand in one place; *ēka'tra* adverb of place from *ēka*.<sup>1</sup> (15.) *Dukh'ēna gam*  
pass. 3d sing. <sup>misery instr. go</sup>

*ya · te*, he is gone to by misery; the passive construction is a favourite idiom.<sup>1</sup>

44. The prevalence of the construction with the past passive participle is a striking and important feature in the above examples, and the use of the passive voice in the last two. There is a remarkable weakness of organisation in 13, in which the subject *munis* seems to have nothing which he realises subjectively.

45. One of the most distinctive features in Sanskrit is the great use which is made of Guna and Vriddhi. This cannot be explained on merely euphonic principles, but must express elements of thought taken up by the root in its various applications to the objects of thought (3, 15, 16, 24, 26-34, 36, 37). It is, as has been observed, an approach to the characteristic formation of the Syro-Arabian languages, though very distinct from that formation (15). And it corresponds exactly with the approximation of the Indian to the Syro-Arabian in respect of the readiness of excitability of his mental action. For while the Indo-European races have this quality in a higher degree than the Syro-Arabian, the Indian is one of those which have it less than others of the Indo-European family (chap. i., Part I., sect. VI.) In him thought spreads on the radical element so as to take in along with it some of the elements associated with it in the object of thought which it is employed to denote. And though this is to be seen in Latin and Greek also, it prevails much less in these languages which are spoken by races of quicker excitability; the tendency to take in a large object in the single act of thought being proportional to the slowness of the mental action in this family, as in every other.

## ZEND.

46. The Zend, as the language is now called in which the Zend-avesta or sacred writings of the Parsees were written, is believed to have been the ancient language of Bactria, and to have prevailed along the northern part of the tableland of Iran or Persia.<sup>2</sup> It has very close affinity to Sanskrit, but more to the old Sanskrit of the Vedas than to the classical Sanskrit of later times.<sup>3</sup> It is extant only in the two dialects in which the scanty fragments of the

<sup>1</sup> Williams, p. 315.

<sup>2</sup> Geiger, Handbuch der Awesta-Sprache, sect. 3.

<sup>3</sup> Haug, Essays on the Sacred Language, &c., of the Parsees, p. 117.

Parsee scripture are written. The more ancient of these is called the Gātha dialect, because the most important pieces preserved in this idiom are the Gāthas or songs; the younger, in which most of the books of the Zendavesta are written, is the classical Zend language, which was for many centuries the spoken and written language of Bactria. The Bactrian language seems to have been dying out in the third century before Christ, and to have left no daughter language behind it.<sup>1</sup>

47. The vowels were more developed in Zend than in Sanskrit. In the Zend alphabet there are four characters for the vowel *e*, two short and two long,<sup>2</sup> but the original pronunciation of the vowels can only be guessed.<sup>3</sup> The *ē* which corresponded to Sanskrit *ē* was probably broader than the other *ē*; for writers often confound the latter with *ī*, which circumstance seems to hint at its close affinity to that sound.<sup>3</sup> And probably these vowels may be *e*, *ē*, *e*, *ē*. There are also *a*, *ā*, *ā*, *i*, *ī*, *u*, *ū*, *o*, *ō*; and diphthongs formed of *a* or *ā* before *i*, *u*, or *o*; also *ēu*, *ēi*, *ou*, *oi*, *ōi*, *ui*, *ūi*. There is also a character *aē*, which, in the middle of words, according to Haug, may be a diphthong; but in the beginning of words *aē* and *āō* are thought by him to be a corrupt mode of writing taken from the Semitic initial Elif.<sup>4</sup> For the Zend texts are handed down to us, not in their original characters, but in a later form of writing which arose very likely shortly after the commencement of the Christian era, when Syriac literature began to spread in Persia, and which is read from right to left.<sup>5</sup> In Bopp's opinion *aē* was equivalent to Sanskrit *ē*,<sup>6</sup> in which case it might be written *ē*. According to Geiger, the Guna of *i* or *ī* is *ae* or *oi*, that of *u* or *ū* is *ao* or *ēu*, the Vriddhi of *i* or *ī* is *āi*, that of *u* or *ū* is *āu*.<sup>7</sup>

The consonants are: *g*, *k*, *k'*, *g*, *g'*, *k'*, *g'*, *t*, *θ*, *d*, *θ*, *p*, *f*, *b*, *h*, *y*, *χ'*, *s*, *z*, *z*, *v*, *w*, *r*, *ñ*, *n*.

There is great doubt as to the true utterance of many of the Zend consonants. There is a peculiar character used for final *t*, and for *t* initial before consonants, but its utterance is not known. The character which corresponds etymologically to Sanskrit *χ'* is said to have been uttered as *ss*;<sup>8</sup> and there are two characters for *n* which seem to have differed only in strength and definiteness of utterance,<sup>9</sup> and two for *ñ*, of which one had an affinity for *a* and the other for *i* and *e*, as if the latter was more palatal, and the former more guttural.<sup>10</sup>

48. The words are separate in Zend, so that the phonetic changes take place only within a word.<sup>11</sup>

Zend is more tolerant than Sanskrit of concurrent vowels, retaining each its natural utterance.<sup>12</sup>

Before final *m* the vowels *i* and *u* are lengthened.<sup>13</sup>

If *i*, *ī*, *e*, *ē*, or *y*, follow a dental, a labial, *n*, *s*, or especially *r*, *i* is generally inserted before that consonant; and if *u*, *ū*, or *v* follow it, *u* is apt to be inserted before it.<sup>14</sup>

<sup>1</sup> Haug, pp. 42, 43.

<sup>4</sup> Ibid. p. 54.

<sup>6</sup> Bopp, Vergl. Gram., sect. 33.

<sup>9</sup> Bopp, Vergl. Gram., sect. 60.

<sup>12</sup> Ibid. sect. 23.

<sup>2</sup> Geiger, sect. 6.

<sup>5</sup> Ibid. p. 53.

<sup>7</sup> Geiger, sect. 14.

<sup>10</sup> Ibid. sect. 62.

<sup>13</sup> Ibid. sect. 27.

<sup>3</sup> Haug, p. 53.

<sup>8</sup> Haug, p. 56.

<sup>11</sup> Geiger, p. 8.

<sup>14</sup> Ibid. sect. 28.



Before an initial *r* an *i* or *u* may be introduced by this influence of the above vowels respectively following it.<sup>1</sup>

Before final *m* or *n*, *a* constantly becomes *ẽ*, often also in the middle of a word before *m*, *n*, *nt*, or *r*.<sup>2</sup>

After *y* or a palatal, *a* often becomes *i*.<sup>3</sup> Final *yam*, *vam*, become *im*, *um*.<sup>4</sup>

After the *a*-vowels *s* becomes *h*,<sup>5</sup> after the other vowels *ś*.<sup>6</sup>

Concurrences of consonants are lightened by dropping consonants, especially *r*, *y*, and *v*; by changing *y* and *v* to *i* and *u*; by aspiration and softening; by insertion of *ř*.<sup>7</sup>

Before *t*, guttural post-palatal and palatal letters become *k'*, dentals become *χ'*, labials become *p*, *χ'* *s* and *z* become *ś*.<sup>8</sup>

Before *n* and *m* tenues and medials are aspirated, and *z* becomes *χ'*.<sup>9</sup>

Before *y* and *r* tenues and medials are aspirated; before *y*, *h* often becomes *q*; before *rp*, *rk*, *h* is inserted.<sup>10</sup>

Before *s* the mutes are aspirated, and if medial lose their sonancy; before final *ś* dentals become *s* and sibilants *ś*.<sup>11</sup>

Final *ā* and *ī* are shortened, *-ya* is apt to become *-ē*, *-bya* often becomes *-vē* or *-wē*, and *-byo* becomes *-vyo*.<sup>12</sup>

The original endings *-as* and *-ās* have become in Zend *-aṇh* and *-aoṇh*, except before the enclitics *-ka* and *-k'id*, and before enclitics beginning with a dental, before which latter *ẽ* is inserted; *-aṇh* and *-aoṇh* are apt to become *-o* and *-ao*.<sup>13</sup>

In the Gāthā dialect *e* is often used for *a*, *ā*, *ã*, or *o*; and *o* for *a* and *ā*; the softening of consonant concurrences is extended; *v* is little used, and often *b* instead of it.<sup>14</sup>

49. There are three genders, masculine, feminine, and neuter.

Nominal stems are formed in *-a*, *-i*, and *-u*; in *-an* to express the agent, *-ana* the neuter abstract, *-āni* feminine of masculine in *-a*, *-anḥ* (nominative *-o* or *-are*) neuter abstract, *-at*, *-ant* (feminine *-i*) adjectives, *-in* substantives and adjectives, *-ka* substantives, *-ma*, *-man* abstract and concrete nouns, *-na*, *-nu* substantives, *-ra* adjectives, *-tha* abstract nouns, *-tu* (mostly masculine) concrete and abstract nouns, *-tar* (nominative *ta*) doer, *-θra* (*θrō* masculine, *θrem* neuter), *-tāt* feminine abstract, *-ya* adjectives expressing affection with the root, *-vat*, *mat* adjectives of having; the root also being subject to Guna or Vriddhi.<sup>15</sup>

50. The case endings are similar to those of Sanskrit, but with all stems the ablative singular *-at* is distinguished from the genitive;<sup>16</sup> the vowel of the accusative is reduced compared with Sanskrit, *-em* for *am*, *ām* for *ām*; the vocative singular is the bare stem when this ends in a vowel except those in *-au*, which, like those in a consonant, form the vocative like the nominative;<sup>17</sup> the nominative accusative dual is *-a* instead of *-au* or *-ē*; the ablative and genitive dual are *-āo* and the locative dual *-yo*, in which *ā* and *y* seem to be case and *o* number,

<sup>1</sup> Geiger, sect. 29.

<sup>2</sup> Ibid. sect. 31.

<sup>3</sup> Ibid. sect. 32.

<sup>4</sup> Ibid. sect. 33.

<sup>5</sup> Ibid. sect. 34.

<sup>6</sup> Ibid. sect. 35.

<sup>7</sup> Ibid. sect. 38.

<sup>8</sup> Ibid. sect. 41.

<sup>9</sup> Ibid. sect. 43.

<sup>10</sup> Ibid. sect. 44.

<sup>11</sup> Ibid. sect. 45.

<sup>12</sup> Ibid. sects. 46-48.

<sup>13</sup> Ibid. sect. 49.

<sup>14</sup> Ibid. sect. 163.

<sup>15</sup> Haug, p. 86-89.

<sup>16</sup> Ibid. p. 93.

<sup>17</sup> Bopp, Vergl. Gram., sect. 205.

The ablative dual maintains itself better than in Sanskrit, in which it is merged in the general idea of dual proximity, *-ūyām*. The locative plural ends in *-va* more usually than in *-u*, i.e., in *-śva* or *-hva* rather than in *-śu*.

The nominative plural of masculine *a*-stems ends in *-āōñhō*, which corresponds to the Vedic *-āsas*;<sup>1</sup> that of neuter *a*-stems adds nothing to the stem.

51. The degrees of comparison of adjectives and the pronouns correspond to those of Sanskrit.<sup>2</sup> The former, *tara*, *tēma*, are attached to the nominative ending;<sup>3</sup> i.e., have *s* originally before them.

52. The verb in Zend differs notably from the Sanskrit verb in having, besides the potential, another ideal mood, which may be called subjunctive, though not always used subjunctively. It is formed from the conjugational stem, and also sometimes from the perfect and the aorist,<sup>4</sup> by inserting *ā* before the person ending; and with the conjugational stem it may take the person endings of the present or those of the imperfect.<sup>5</sup> The difference seems to be that in the former the subject is thought as the present subject of the probability, and in the latter as the probable or ideal subject of the probable event. The ideal or uncertain nature of the event denoted by *ā* seems to be thought as what is protracted or postponed, because possibly never to be realised. Yet it seems, at least with the present persons and the conjugational stem, to express what is expected, for it is the usual expression of the future, the future tense in its proper formation being little used.<sup>5</sup> With the imperfect person of third singular it is chiefly used in an imperative sense.<sup>6</sup>

The potential also in Zend is used in the perfect and aorist.<sup>4</sup> Its formation as well as that of the precativè is similar to Sanskrit. The precativè is often used as an hypothetical, and occasionally in a strictly potential sense.

53. The ten conjugational stems are to be found in Zend as in Sanskrit, and are used not only in the present, imperfect, and imperative, but also in the present potential and present subjunctive, of which moods in most verbs no other tense is extant.<sup>7</sup>

Moreover, the affection of the verbal stem described in 16 is in Zend as in Sanskrit.<sup>7</sup>

54. There are also similar formations of derived verbs, passive, causal, denominative, desiderative, and intensive. In the intensive the whole root is generally repeated in Zend, but in the older Gāthā dialect there is generally only reduplication of the first syllable with Guna of its vowel. The passive is sometimes expressed by the middle.<sup>8</sup>

55. The person endings are as follows :<sup>9</sup>

<sup>1</sup> Haug, p. 93-104.

<sup>2</sup> Ibid. pp. 89, 106-110.

<sup>3</sup> Bopp, Vergl. Gram., sect. 291.

<sup>4</sup> Geiger, sect. 107.

<sup>5</sup> Haug, p. 64.

<sup>6</sup> Ibid. p. 65.

<sup>7</sup> Ibid. pp. 73, 74.

<sup>8</sup> Ibid. p. 60-62.

<sup>9</sup> Ibid. p. 72; Geiger, sect. 112.

ACTIVE.									
Singular.			Dual.			Plural.			
1	2	3	1	2	3	1	2	3	
Present	<i>mi</i>	<i>hi</i>	<i>ti</i>	<i>vahi</i>	... <i>tō, θō</i>	<i>mahi</i>	<i>θa, dām</i> *	<i>nti</i>	
Imperfect	<i>em</i>	<i>s, ō</i>	<i>t</i>	<i>va</i>	... <i>tem</i>	<i>ma</i>	<i>ta</i>	<i>n, ā</i>	
Imperative	<i>ā, āni</i> <i>a</i>	<i>di, ḡi</i>	<i>tu</i>	...	...	<i>āma</i>	<i>ta</i>	<i>ntu, tāt</i>	

MIDDLE.									
Singular.			Dual.			Plural.			
1	2	3	1	2	3	1	2	3	
Present	<i>ē</i>	<i>nhē</i>	<i>tē</i>	...	... <i>ōiθē</i>	<i>maiḡē</i>	<i>ḡwcm</i>	<i>ntē</i>	
Imperfect	<i>ē</i>	<i>nha</i>	<i>ta</i>	...	... <i>ōiθē</i>	<i>maiḡi</i> <i>maḡi</i>	<i>ḡwcm</i>	<i>nta</i>	
Imperative	<i>āi</i> <i>ānē</i>	<i>χ'ra</i> <i>naha</i>	<i>tām</i>	...	...	<i>āmaiθē</i> *	<i>ḡwcm</i>	<i>ntām</i>	

Those marked \* belong to the Gātha dialect.

The imperfect is augmented with *a-*, but the augment is often omitted.<sup>1</sup>

The potential middle second singular person ending is *sa*, owing to the influence of *i*. The potential active second dual is *tem*.

The person endings of the reduplicated perfect are :

ACTIVE.						MIDDLE.					
Singular.			Plural.			Singular.			Dual.	Plural.	
1	2	3	1	2	3	1	2	3	3	3	
<i>a</i>	<i>θa</i>	<i>a</i>	<i>ma</i>	<i>θa</i>	<i>us</i>	<i>ē</i>	<i>sa</i>	<i>ē</i>	<i>aitē</i>	<i>are, cre</i> <sup>2</sup>	

The reduplication is as in Sanskrit, except that the vowel is often long ; sometimes it is dropped, and the vowel of the root lengthened for compensation.<sup>3</sup>

56. The aorist formations occur in the Gātha dialect oftener than in Zend, in which the *s-* formations are very scarce.<sup>4</sup>

The two future formations of Sanskrit are to be met with in Zend in a few instances only. Now and then we find the *sa-* formation of the aorist used with the present persons for a future, of course without the augment. The present of *bū* to be, has a future significance ; and even its imperfect in a shortened form, compounded with a participle, as *pereχ'ennō bva*, I shall be asking.<sup>5</sup>

57. The participles are similar to the Sanskrit.<sup>6</sup>

The infinitive mood is expressed in various ways. In the Gātha dialect, as in the Vedic language, it ends in *θyāi*, *dyaī*, and *ānhē* (*asē*),

<sup>1</sup> Haug, p. 77.

<sup>2</sup> Ibid. p. 78.

<sup>3</sup> Ibid. p. 78, 81.

<sup>4</sup> Ibid. p. 79.

<sup>5</sup> Ibid. p. 82.

<sup>6</sup> Ibid. pp. 83, 84.

which in their true nature are datives. In the usual Zend the dative of abstract nouns in *-ti* or *-na* is used for it.<sup>1</sup>

The gerunds of Sanskrit are not in Zend. But there is a declinable verbal adjective in *-ya*<sup>2</sup> (37).

58. The prepositions are, as to their position, used very freely. If compounded with a verb they may be separated from it; often they are put twice, without the verb and with it. They can be placed before or after the noun, and are generally between the noun and an adjective or participle agreeing with it. They govern various cases, as in Greek and Latin.<sup>3</sup>

59. Composition seems to have been carried little, if at all, farther than in Greek, and to form words rather than syntactical combinations. The copulative or Dwandwa compounds are of comparatively rare occurrence. None of the compounds apparently have more than two components, and these are sometimes connected by *ō*.<sup>4</sup>

## GREEK.

60. The Greek and Latin languages, being familiar to every scholar, no account will here be given of their structure, beyond what may be suggested by comparison with Sanskrit and Zend.

The Greek phonesis differs from the Sanskrit in being more vocal, and in showing more activity and more muscular tension in the organs of speech in the mouth.

The first of these differences appears in the greater development of vowels in Greek than in Sanskrit, and in the smaller development of consonants. For the greater attention to the vowels in Greek, and to the consonants in Sanskrit, led to discriminations in the use of these respectively in each language which did not exist in the other.

Thus for Sanskrit *a* we find in Greek *α*, *ε*, or *ο*; for Sanskrit *ā*, we find *ᾱ*, *η*, or *ω*; for Sanskrit *ē* we find *αι*, *ει*, or *οι*; for Sanskrit *āi* we find *αι*, *ηι*, or *οι*; for Sanskrit *ō* we find *αυ*, *ευ*, or *ου*; for Sanskrit *āu* we find *αυ* or *ηυ*; *i* and *u* correspond in both.<sup>5</sup>

On the other hand, Sanskrit distinguishes palatal consonants from post-palatals, and cerebrals or ante-palatals from dentals, while Greek makes neither of these distinctions. The preference of the vowel in Greek sometimes causes an initial *s*, followed by a vowel, to be<sup>6</sup> weakened to a *spiritus asper*, and *s* between vowels to be dropped; and often a vowel is prefixed or inserted to give more vowel sound in the formation of the word,<sup>7</sup> while the semi-vowels *y* and *w* are apt to be vocalised or absorbed into vowels.<sup>8</sup>

The tendency to vowel utterance so encroached on semi-vowel utterance, that as a habit of speech this was lost, and *y* and *w*, when not vocalised, were either changed into other consonants or dropped.

<sup>1</sup> Haug, p. 85.

<sup>2</sup> Ibid. p. 86.

<sup>3</sup> Ibid. p. 113.

<sup>4</sup> Ibid. pp. 90, 91; Geiger, sect. 165.

<sup>5</sup> Curtius, Gr. Etym., p. 394.

<sup>6</sup> Ibid. pp. 394, 414. <sup>7</sup> Ibid. p. 709-721.

<sup>8</sup> Ibid. pp. 550-565, 591-597.

For their change into vowels in those places where there was less tendency to utter them as consonants caused them to become consonants in those places where that tendency was greater, because they lost the associations of the softer utterance. The degree in which the semi-vowels would be hardened in such places would depend on the general hardness or softness of consonant utterance in the language (97, 101).

The activity of the organs of speech in Greek is contrasted with the indolent utterance of Sanskrit in the definiteness and distinctness of enunciation in the former, and their versatility of action appears in their dispensing with so many of those euphonic changes which in the latter help to slur over the transitions of utterance and diminish the changes of action for which the organs are not ready. Such combinations as  $\pi\tau$ ,  $\pi\tau$  in the beginning of a word show great readiness of change of utterance. And it was probably owing to greater force and tension of the organs of the mouth in the utterance that the tennes took the place of the tenuis aspirates, and that the surd aspirates  $\chi$ ,  $\theta$ , and  $\phi$  took the place of the medial aspirates  $\acute{g}$ ,  $\acute{d}$ ,  $\acute{b}$ .

The euphonic changes in the initials and finals of words in Sanskrit are increased by another cause which strongly distinguishes Sanskrit speech from Greek, the degree in which the words are run each one into the following. For if Sanskrit is remarkable amongst languages for this peculiar feature, Greek is equally remarkable for the distinctness with which the words are separated from each other. This is plainly indicated by the *spiritus lenis*; for its notation in writing shows that it must have been distinctly felt in speech as the beginning of the utterance of an initial vowel. And the accent, when it was on the last syllable, fell, to mark the end of the word, and distinguish it from the next word. When no word followed immediately the accent did not fall.

61. The laws of euphonic change in Greek are as follows. A tenuis, a medial, or an aspirate can be immediately preceded in a word by no other mute than a tenuis, a medial, or an aspirate respectively, probably because the vocal tendency of Greek speech led to a simplification of the mute concurrence by partial assimilation;  $\chi$ ,  $\theta$ , and  $\phi$ , though latterly they became spirants, are in their origin aspirates,<sup>1</sup> and are usually called so, and will be called so here.

Aspirates do not begin successive syllables, probably because their repetition would offend the Greek definiteness of utterance; and to avoid this the first generally becomes tenuis.

No mute except  $\pi$  and  $\kappa$  can immediately precede  $\sigma$ .

M changes a preceding labial to  $\mu$ , a post-palatal to  $\gamma$ , a dental to  $\sigma$ .

N becomes labial ( $\mu$ ) before a labial, post-palatal ( $\gamma$ ) before a post-palatal, is assimilated before  $\lambda$ ,  $\mu$ ,  $\xi$ , and is generally dropped before  $\sigma$  and  $\zeta$ .

E between two liquids sometimes becomes a medial.

62. Greek has masculine nouns in  $-\acute{\alpha}\varsigma$  and  $-\eta\varsigma$ , as well as those in  $-\alpha\varsigma$ , which latter correspond to the masculine  $\alpha$ -stems of Sanskrit, and they are all similarly declined, being related to Sanskrit (4) as follows.

<sup>1</sup> Curtius, Gr. Etym., p. 416-418.

Their genitive singular  $-ov$  is contracted from  $-\bar{a}o = -\bar{a}(\sigma i)o$ ,  $-\varepsilon\omega = -\eta(\sigma i)o$ ,  $-oio = o(\sigma i)o$ , = Sans.  $-asya$ . Dative singular  $-\bar{a}i = \bar{a}i(\alpha)$   $-\eta = -\eta i(\alpha)$   $-\omega = -\omega i(\alpha)$  = Sans.  $-\bar{a}ya$ . Accusative singular  $-v$  = Sans.  $-m$ . Nominative accusative dual  $-\alpha = \alpha\varepsilon$ ,  $-\omega = o\varepsilon$ ,  $\varepsilon = \text{Zend } \check{a}$  (50). Genitive dative dual  $-\alpha v = -\alpha(\phi)i(\bar{a})v$  = Sans.  $ab'yām$ ,  $-\alpha v = o(\phi)i(\bar{a})v$ ,  $v = m$ , the Greek genitive in the dual being the same as the dative. Nominative plural  $-\alpha i = \alpha i(\varepsilon\varepsilon)$ ,  $-\alpha i = o i(\varepsilon\varepsilon)$  (9). Genitive plural  $-\bar{\omega} v = -\alpha\omega v = \alpha(\sigma)\omega v$ ,  $-\omega v = o(\sigma)\omega v$  (13). Dative plural  $-\alpha i\varepsilon = \alpha i\sigma i = \alpha(\phi)i\sigma i(v)$ ,  $\phi i\sigma v = b'yasam$ , from which Sans.  $b'yas$ ,  $-\alpha i\varepsilon = o i\sigma i = o(\phi)i\sigma i(v)$  (12). Accusative plural  $-\bar{\alpha}\varepsilon = \alpha(v)\varepsilon$ ,  $-\omega\varepsilon = o\varepsilon$  (143). The difference between the nouns in  $-\alpha\varepsilon$  and those in  $\eta\varepsilon$  is confined to the singular.

There are some old locatives in  $-oi$  = Sans.  $\bar{o}$ , as  $\alpha\iota\kappa oi$ , at home.

The nominative and accusative singular of the neuter  $o$ -stem takes the quiescent nasal, and  $-ov$  = Sans.  $-am$ . In the plural the final vowel of the stem is heavier, being expressive of an aggregate (14); and  $-\alpha$  represents Sans.  $-\bar{a}ni$ .

Greek has feminine nouns in  $\check{a}$ , as well as in  $\eta$ , and in  $-\bar{a}$  after  $g$  or a vowel. Their genitive  $-\eta\varepsilon = (\alpha i)\eta\varepsilon$ ,  $\check{\eta}\varepsilon = (\eta i)\eta\varepsilon$ ,  $-\alpha\varepsilon = (\bar{a}i)\bar{a}\varepsilon$ , = Sans.  $-\bar{a}yās$ . Dative  $-\eta = (\alpha i)\eta$ ,  $-\check{\eta} = (\eta i)\eta$ ,  $-\bar{a}i = (\bar{a}i)\bar{a}$ , = Sans.  $\bar{a}ya i$ . Accusative  $-\bar{a}v$ ,  $-\eta v$ ,  $-\bar{a}v$  = Sans.  $-\bar{a}m$ . Dual and plural the same as the preceding.

The remaining nouns have genitive  $-o\varepsilon$  = Sans.  $as$ , dative  $-i$  = Sans.  $\bar{e}$  reduced by loss of  $a$ , i.e.  $(\alpha)i$ ; accusative  $-\alpha$  or  $-v$  = Sans.  $-am$ , curtailed of  $m$  in the former. Nominative accusative dual  $-\varepsilon = \text{Zend } \check{a}$  (50). Genitive dative dual  $-\alpha v$  = Sans.  $ab'yām$ ; nominative plural  $-\varepsilon\varepsilon$  = Sans.  $-as$ ; genitive plural  $-\omega v$  = Sans.  $-\bar{a}m$ ; dative plural  $-\sigma i$ ,  $-\varepsilon\sigma\sigma i$  ( $\varepsilon$  being inserted after a consonant) =  $\phi i\sigma i(v)$ , Sans.  $b'yasam$  (12); such forms as  $\nu\epsilon\kappa\acute{o}\varepsilon\sigma\sigma i$  would suggest an original  $ab'yasam$  (111); accusative plural  $-\alpha\varepsilon$  = Sans.  $-as$ . The nominative, accusative singular of neuters is the stem; in the plural  $\alpha$  is added to the stem to make it heavier as an aggregate.

Stems not neuter which end in a consonant generally distinguish the nominative singular either by taking  $\varepsilon$  or by lengthening the vowel of the last syllable. Stems ending in  $\varepsilon$  drop it before the case endings. The vocative singular of Greek nouns is generally the bare stem, except that of neuters, in  $-ov$ , and of stems ending in a consonant which is not allowed at the end of a word, both which form the vocative like the nominative.

63. Adjectives whose stem in the masculine and neuter ends in  $\alpha$ , generally make the feminine stem end in  $-\eta$  or  $-a$ . Those in  $-\nu\tau$  and  $-v$ , and  $\mu\epsilon\lambda\alpha\nu$  and  $\tau\alpha\lambda\alpha\nu$ , make it end in  $-\alpha$ , whose  $i$  tends to precede a final consonant of the stem, or to be absorbed in the conversion of dentals to sibilants. Stems which end in a consonant, before which the vowel is lengthened in the nominative, masculine, and feminine, have no feminine form. Others have no feminine form, being compounds or derivatives which are less simple in idea, and consequently less capable of a strong sense of the noun. The endings of the degrees of comparison  $-\iota\omega\nu$ ,  $-\iota\sigma\tau\omicron\varepsilon$  = Sans.  $-\bar{i}yans$   $-\bar{i}\check{s}t'ā$ ,  $-\varepsilon\sigma\tau\varepsilon\omicron\varepsilon$ ,  $-\varepsilon\sigma\tau\alpha\tau\omicron\varepsilon$  =  $iyastara$   $iyastata$  (82).

64. The first personal pronoun as subject is  $\epsilon\gamma\acute{\omega}$ ,  $\epsilon\gamma\acute{\omega}\nu$  = Sans.  $aham$ . The second is  $\sigma\acute{u}$ ,  $\tau\acute{u}$ ,  $\tau\acute{u}\nu\eta$  = Sans.  $tvam$ . The objective stem of the

former in the singular is  $\mu\epsilon, \mu\sigma$ , = Sans. *ma*, of the latter  $\sigma\epsilon, \tau\epsilon, \sigma\sigma$ , Sans. *twa*, the *w* being dropped; and  $\mu\epsilon, \sigma\epsilon$ , being themselves objective, need no case ending for the accusative. The first person also prefixes  $\epsilon$  to  $\mu$ , according to Greek habit, perhaps to make the beginning of the word more distinct (60).

The Epic genitive of the second person,  $\tau\epsilon\sigma\tilde{\iota}\sigma$ , is remarkable, for it shows the stem as  $\tau\epsilon\sigma$ ,  $\epsilon$  for *w*; but  $\tau\epsilon\sigma\upsilon = \tau\epsilon\sigma\iota\sigma = \tau\epsilon\sigma\cdot(\sigma)\iota\sigma$ , and the form  $\tau\epsilon\sigma\tilde{\iota}\varsigma = \tau\epsilon\sigma\cdot(\sigma)\iota\sigma\varsigma$ , gives the full ending *-sgus* (9). The datives  $\epsilon\mu\tilde{\iota}\nu, \tau\epsilon\tilde{\iota}\nu$ , are also remarkable as preserving the nasal of *ūyam*.

The stem of the dual is  $\iota\omega$  = Sans. *nanu*, and  $\sigma\phi\omega$ , in which  $\phi$  comes from *v*; their old cases were  $\nu\tilde{\omega}\iota, \nu\tilde{\omega}\iota\nu, \sigma\phi\tilde{\omega}\iota, \sigma\phi\tilde{\omega}\iota\nu$ .

The stems of the plural correspond to those of the oblique cases in Sanskrit, the nominative having an ending of the masculine *a*-stems (9).

65. The ten conjugational stems of the verb (15) are to be found in Greek. Bopp gives the following as examples of them: (1.)  $\lambda\epsilon\iota\pi\omega, \phi\epsilon\acute{\upsilon}\gamma\omega$ ; but in these the Guna is not limited to the present and imperfect; 2 and 3 almost confined to roots ending in a vowel,  $\epsilon\iota\mu\iota, \phi\eta\mu\iota, \iota\sigma\tau\eta\mu\iota, \tau\acute{\iota}\delta\eta\mu\iota, \acute{\alpha}\iota\delta\omega\mu\iota$ ; (4.)  $\beta\acute{\alpha}\lambda\lambda\omega (\beta\alpha\lambda\lambda\eta\omega), \pi\acute{\alpha}\lambda\lambda\omega, \acute{\alpha}\lambda\lambda\omicron\mu\alpha\iota, \pi\acute{\rho}\alpha\sigma\sigma\omega, \phi\epsilon\acute{\iota}\sigma\sigma\omega, \lambda\acute{\iota}\sigma\sigma\omicron\mu\alpha\iota, \beta\acute{\upsilon}\lambda\omega, \beta\lambda\acute{\upsilon}\lambda\omega, \beta\acute{\epsilon}\iota\lambda\omega, \sigma\chi\acute{\iota}\lambda\omega$ ; (5.)  $\tau\acute{\iota}\nu\upsilon\mu\iota, \xi\acute{\epsilon}\nu\upsilon\mu\iota, \zeta\acute{\omega}\nu\upsilon\mu\iota, \acute{\rho}\acute{\omega}\nu\upsilon\mu\iota, \sigma\tau\acute{\epsilon}\zeta\omega\nu\upsilon\mu\iota, \chi\acute{\epsilon}\zeta\omega\nu\upsilon\mu\iota$ ; (6.)  $\gamma\lambda\acute{\iota}\chi\omicron\mu\alpha\iota$ ; (7 and 9.)  $\lambda\alpha\mu\beta\acute{\alpha}\nu\omega, \lambda\iota\mu\pi\acute{\alpha}\nu\omega, \mu\alpha\iota\theta\acute{\alpha}\nu\omega$ , the first nasal belonging to the seventh conjugation, and the second to the ninth transposed; (8.)  $\tau\acute{\alpha}\nu\upsilon\mu\alpha\iota, \acute{\alpha}\nu\upsilon\mu\iota, \gamma\acute{\alpha}\nu\upsilon\mu\alpha\iota$ ; (9.)  $\delta\acute{\alpha}\nu\eta\mu\iota, \pi\acute{\epsilon}\tau\eta\mu\iota$ ; (10.)  $-α\lambda\omega, -α\omega, -ε\omega, -ο\omega$ ; <sup>1</sup> but some of these are only denominative. There are also stems in  $-\sigma\kappa\omega, \acute{\eta}\beta\acute{\alpha}\sigma\kappa\omega, \beta\iota\beta\acute{\omega}\sigma\kappa\omega, \gamma\iota\gamma\acute{\nu}\omega\sigma\kappa\omega$ . Some verbs also in Greek strengthen the root with  $\tau$  in the present and imperfect, as  $\tau\acute{\upsilon}\pi\tau\omega, \tau\acute{\iota}\chi\tau\omega$ .

With regard to their inflection, the Greek verbs are divided into those in  $\omega$  and those in  $\mu\iota$ . To the former belong all verbs which in forming their stem add to the root  $\epsilon$ , or a syllable ending in  $\epsilon$ , which before a nasal generally becomes  $\sigma$ , and corresponds to Sanskrit *a*. To the latter belong all other verbs.<sup>2</sup>

66. The affection of the verb described in 16, so far as it concerns verbs of the third conjugation in Sanskrit, may be traced in the present and imperfect of verbs in  $\mu\iota$ , which have a long vowel before the persons in the singular, but not in the dual and plural. This, however, is not to be observed in the imperative, which in Greek is probably thought more in the accomplishment and less in the subject than in Sanskrit.

The vowel which corresponds to Sanskrit *a* before the person endings is not lengthened as in Sanskrit before the first person, as if there was not the same sense of the subjectivity of self above that of other persons. And there seems to be a tendency in the subjective affection of the person to be absorbed into the verb, and the person to be less fully thought than in Sanskrit. Hence there is less distinction than in Sanskrit between the person endings of the present and those of the past. The final  $\iota$  expressing present engagement of the persons is to be found in the singular of the present in verbs in  $-\mu\iota$ , except in the second person, whose element sufficiently expresses the person as subject, whereas  $\mu$  is the objective element of

<sup>1</sup> Bopp, Vergl. Gram., sect. 109a.

<sup>2</sup> Ibid. sect. 494.

the first person, and the third person is objective in its nature, and both of them therefore need more than the second. But in verbs in  $-\omega$  the vowel preceding the person which, like Sanskrit  $a$ , expresses the process of being or doing, takes up in the singular the engagement of the person, and well nigh absorbs the person in its own subjectivity. In Doric the second singular, both present and past, of verbs in  $-\mu$ , and verbs in  $-\omega$ , is apt to end in  $\sigma\theta\alpha$ , a stronger expression of it,  $\sigma$  and  $\theta$  both denoting the second person (67).

In the first person dual and plural, and second and third dual in Sanskrit, the sense of present engagement makes the individuals to be so fully thought that in the present they are denoted by  $s$  in *vas, mas*; but without the sense of present engagement the predominant consciousness of self so prevails in the first dual and plural that in the imperfect potential and imperative the associated individuals are not distinguished (*va ma*). In Greek there is neither the same predominant sense of self nor the same sense in the person of the present engagement, and though the natural distinction of self from the associated individuals maintained the  $\epsilon$  originally in the first plural of all the tenses, as in Doric, yet the plurality came to be expressed with less sense of the individuals by  $\nu$  as massed together, and was expressed alike in the present and the past. In the other persons of the present and imperfect the differences between Greek and Sanskrit are merely euphonic.

67. The Greek optative, which corresponds to the Sanskrit potential (18), agrees with the imperfect in its person endings, except in the first singular in verbs in  $-\omega$ , which expresses more sense of the engagement of self than in the imperfect.

In verbs in  $-\mu$ , the third plural, both in the imperfect and the optative, is fuller than in verbs in  $-\omega$ , expressing the person by  $\sigma$ , as well as the plurality by  $\alpha\nu$ , probably because these verbs, having less sense of the process of subjective realisation in their stem, have the thought of the subject thrown more on the person. In the imperative also the third person which, in the singular, is  $-\tau\omega$ , corresponding to Sanskrit  $-tu$ , and in the dual  $-\tau\omega\nu$ , is in the plural either  $-\nu\tau\omega\nu$ , which adds to the Sanskrit  $-ntu$  a final  $n$  of combination, or  $-\tau\omega\sigma\alpha\nu$ ; which seems to indicate the strength with which the command is thought, first as applied to the individual, and then pluralised by the addition of a third person plural. In verbs in  $-\mu$ , as in the corresponding Sanskrit verbs, the second singular imperative is  $-\theta$ ; for where there is no vowel annexed to the root or stem to express process of what is realised, there tends to be more stress thrown on the person, so that it requires a stronger form.

68. The person endings of the perfect correspond to those of the present in the dual and plural, to those of the past in the singular; but the nasal of the first singular is vocalised and absorbed by the  $a$  of the tense element. The persons are thought with more distinctness in the singular than in the dual or plural, and their want of present engagement is more strongly noted. In the dual and plural the sense of present accomplishment is sufficient to cause the persons to be thought as in the present.



69. In the middle and passive, as in the active, the first person has less affinity for  $\alpha$  in Greek than in Sanskrit (17); and therefore its consonant  $\mu$  is not vocalised. The present engagement of the person is expressed by  $-\alpha\iota$ , as by Sanskrit  $-\bar{e}$ ; but this is not, as in Sanskrit, carried through the dual and the plural. It gives place in the dual to  $\nu$ , which expresses a sense of combination, and in the plural to  $\alpha$  or  $\varepsilon$ , which gives an element of extension, except in the third person, which, by reason of its objective nature, needs, as in the active, to be animated with present engagement, and therefore takes  $-\alpha\iota$ ; and this in the past is changed to  $-\alpha$ .

It is only in the third person that the dual and plural endings of the present differ from those of the past; the third dual of the past ending in  $-\eta\nu$ , as in the active voice. But in the singular the first person is expanded into a double expression  $-\mu\eta\nu$ , a thought of the first person ( $\nu$ ) as quiescent  $-\eta\nu$  being substituted for the present engagement  $-\alpha\iota$ . In the second and third singular as in the third plural, the  $\iota$  is dropped and the endings are  $-(\sigma)\theta$ ,  $-\varepsilon\tau\theta$ .

In the first person dual and plural, present and past, the associated individuals are denoted by  $\theta$ , a relaxed utterance of  $\varsigma$ , and which corresponds here to  $h$  in Sanskrit and Zend. But in the second and third dual and second plural, and also in the imperative in the third singular and plural,  $\sigma\theta$  is an expression of the person element, expanded and relaxed by the abiding and quiescent nature of the middle or passive; which, however, is abridged in the perfect when the root ends in a consonant, by dropping  $\sigma$  and the vowel which precedes it.

70. The first aorist corresponds to the fourth formation of the Sanskrit aorist (27); and the second aorist to the sixth formation.

Reduplication seems to be lighter in Greek than in Sanskrit; it does not take the vowel of the root.

The perfect takes an element which is doubtless akin to  $\sigma\alpha$  of the first aorist, and which seems to be  $\chi\alpha$ , becoming  $\alpha$  after a vowel, and dropping  $\chi$  after a consonant, the consonant having been aspirated. When the root ends in a dental, the dental is dropped, and  $\alpha$  is taken. When the root ends in a mute, it is apt, especially if a monosyllable, to change a radical  $\varepsilon$  to  $\alpha$ .

The pluperfect in Doric ends in  $-\varepsilon\iota\alpha$ , in which the  $\iota$  is probably a vocalisation of  $\sigma$ , the past element added to the perfect being  $-\sigma\alpha$ . In the ordinary form the  $\alpha$  is dropped, and  $\varepsilon\sigma$  becomes  $\varepsilon\iota$  before the person endings, as  $\varepsilon\sigma$  becomes  $\varepsilon\iota$  in  $\varepsilon\iota\mu\iota$ .

The future corresponds to the Sanskrit future in  $-\sya-$ ,  $y$  being dropped, and it takes the present person endings.

There is another future formed from the root by adding to the vowel which precedes the person endings (52), so that in the first singular  $\omega$  becomes  $\tilde{\omega}$ , and in the other persons  $o$  becomes  $\tilde{o}$ , and  $\varepsilon$  becomes  $\tilde{\varepsilon}$ .

A second perfect also and pluperfect are formed from the root, or from the present stem, dropping from the tense element the  $\alpha$  or the aspiration. When the root ends in a consonant, and is a monosyllable containing  $\varepsilon$ ,  $\varepsilon$  is changed to  $o$  in the second perfect, to  $\alpha$

generally in second aorist; sometimes a short radical vowel is lengthened in the second perfect.

These secondary tenses, the second aorist, second future, and second perfect and pluperfect, are a remarkable feature in Greek. They are mostly formed from the root, whereas the first aorist and first future may be formed from the root, strengthened with Guna. The secondary tenses also add to the root weaker elements than those which belong to the corresponding primary tenses. Few verbs, however, have both formations. Verbs whose stem ends in a vowel, form, with very few exceptions, only the primary tenses. No verb has all the tenses.

71. Verbal stems ending in a consonant subjoin immediately the element of the primary tenses. The final consonant of the stem, if a dental, is dropped. If it be a liquid it relaxes the  $\sigma$  of first future and first aorist, so that this is vocalised, and in the future absorbed into the vowels which follow it (52), but in the first aorist into the vowel of the stem either as  $\iota$  or as a lengthening.

Verbal stems ending in a short vowel are apt to lengthen it before the subjoined element of the primary tenses. This seems to take place when the vowel expresses a verbal element of thought added to the root, as when  $\alpha$  expresses an external application of what the root denotes, as in  $\pi\rho\acute{\iota}\mu\alpha\acute{\iota}\omega$ ;  $\epsilon$  the subjective possession of it, as in  $\phi\rho\acute{\iota}\lambda\acute{\epsilon}\omega$ ;  $\omicron$  the causation or making of it, as  $\delta\rho\alpha\iota\acute{\omicron}\omega$ . In such cases the element expressed by the vowel is in a great degree absorbed by the root, and the addition of another verbal element, as  $\sigma\alpha$ , &c., in combining with it strengthens the thought of it and draws it out. When, however, the final vowel of the verbal stem is radical, or has no meaning additional to the root, it is not lengthened. And when the verbal stem has a syllable ending in a consonant added to the root, as  $-\alpha\zeta\omega$ , then it takes up the tense element as a stem ending in a consonant takes it.

72. Greek, like Zend, has, besides the optative or Sanskrit potential, the subjunctive formed as in Zend (52), except that it never takes the imperfect person endings. It expresses the aim or end of a present or future fact or a probable supposition; the optative the aim of a past fact or a less probable supposition.

The optative in verbs in  $-\mu\iota$  is strictly similar to the potential of the corresponding verbs in Sanskrit. The first aorist optative in Æolic took the  $\iota$  between  $\sigma$  and  $\alpha$ , and lengthened it to  $\epsilon\iota$ . For Greek is distinguished above all languages by its sense of tense and of mood, the latter especially appearing in the extent to which the contingent and ideal are thought as well as the actual in the various positions in time in reference to the standpoint of the speaker, so that all the tenses have the optative, and all but the future tenses have the subjunctive and imperative. A future expectation or command is thought from the future standpoint as present, while an expectation or command of what is future is itself present.

Zend and Vedic Sanskrit approach Greek in their sense of the mood of the tense.

73. The full form of the infinitive is  $-\mu\epsilon\nu\alpha\iota$ , the dative of a verbal

noun (57) in  $-\mu\epsilon\nu$ , which by its nasals expresses the going on of the verbal succession, thought as a noun. The nasal part of the form has a strong affinity for those stems which have an element of process corresponding to Sanskrit  $a$  of the first conjugation; and their infinitive ended in  $-\epsilon\mu\epsilon\nu$ , from which afterwards  $\mu$  was dropped, and the ending became  $\epsilon\nu$ .

Other stems held by the latter part  $-\nu\alpha$  in their infinitives, the  $\nu$  being vocalised and dropped after the strong  $\alpha$  of the first aorist, but retained after the weaker  $\alpha$  of the perfect, which becomes  $\epsilon$ .

In the middle and passive the verbal noun whose dative is the infinitive ends in  $-\sigma\theta$ , which is a relaxed utterance of the issuing of fact into realisation (27), expressive of the relaxation or quiescence of the middle or passive.

The infinitive, though properly a dative, may be abstracted from being governed, and being thought as an aim may be used in any case, even as a nominative. In such use it may be accompanied by the noun in which as a verb it would be realised as its subject; but not being a verb realised in a subject it is thought externally to the noun as an aim attributed to it. Thought passes from the infinitive to the noun with a sense of attribution to it, so that the noun is thought as an object; and being thought abstractly as an object to which, without further particularising the relation, the noun is thought as an accusative, and is expressed in that case; so that the construction is an accusative depending on the infinitive (230).

74. There is a remarkable difference between the Greek passive and the Sanskrit passive. The latter is distinguished from the middle only in the present parts of the verb, the former only in the other parts. It is to be observed, however, that in the non-conjugational parts the passive is expressed in Sanskrit by the participle and verb substantive (30), and therefore more as a completed effect than it is expressed in Greek. This must also be the significance of the passive element in Sanskrit in the conjugational parts. So that the passive is thought throughout more as an effect in Sanskrit than in Greek.

In the perfect the sense of effect generally needs no other expression than the reduplicated root with the middle or passive persons of the present. But in the aorist and the future an element expressive of the passive is subjoined to the root. This in the first aorist and first future is  $-\theta\eta$ , sometimes  $-\sigma\theta\eta$ , and in the second aorist and second future  $-\eta$ , the relaxed consonant and long vowel expressing the passivity of the being. In the perfect sometimes, especially when the stem ends in a vowel, there is a trace of the passive element in the addition of  $\sigma$  to the root. In the future the person is thought with present engagement as expecting it, but not in the aorists, and accordingly in them they lose the middle or passive form, and are the same as if they were the past persons of a neuter verb.

The Greek thinking the passive in the effect and yet as a personal verb, developed a future perfect, which is not in the active or middle.

75. The Greek participles are similar to the Sanskrit.

76. To the Sanskrit causative formation of verbs (31) correspond some of those in -αζω, -ίζω, -αινω. To the intensive formation (33) correspond, according to Bopp, τωθάζω, παιπαάλλω, δαιδάλλω, &c.; the latter, instead of lengthening α, add ι.<sup>1</sup> There are also formations from the perfect, as τεθνήκω, κεκλήγω. Frequentatives also are formed in -αζω, -ίζω, -ύζω, as ἐπιπτάζω, αἰτιζω, ἐξπύζω.

Desideratives, like δρασείω, are formed from roots, as Sanskrit desideratives in -sya from the stems of nouns.

To the Sanskrit denominatives (34) correspond ποδιζω, ἀκοντιζω, γυναικίζω, ὀνομάζω, μελαινώ (μελανιω), &c.;<sup>2</sup> also with desiderative meaning σπλατηγιάω, &c. And there is another denominative formation -εω, not in Sanskrit, πολιτεύω, ἱατρεύω, &c.

77. The following examples of the derivation of nominal stems in Greek, though not arranged as those of Sanskrit in 3, may readily be compared with them. The stem, when not given by dropping -ς or -ν, is in parenthesis.

*Nominal stems derived from verbs or roots.*

Substantives denoting the agent: πομπῆς, τροφῆς, ἀρωγῆς (ἀρήγω); κριτῆς, δικέτης, ποιητῆς; σωτῆς; ῥήτωρ (-ορ); ἰατρῆς; γραφεύς; ὀρνιθοθήρας bird-hunter; ταμίας; τριηράρχης; ἱερεύς. Feminine agent, αὐλητρίς (-τρίς), αὐλήτρια flute-girl; σῶτις. Adjectives active, ὑποπτός suspecting; καλυπτός covering; πτυάς (-αδ) spitting; φορέας bearing.

Substantives denoting the action: ποίησις, θυσία, παιδεία, φθορά, τομή, κακυτός; the state, ὀδυρμός weeping, κλανθμός, θ a verbal element, πότμος, ἡδονή, ἀγχόνη strangling; the activity, δύναμις, φήμις, φήμη, γνώμη, μνήμη, γραμμή; the instrument or means, ἄροτρον, λύτρον, ἐχέτης handle; the thing done, πᾶγμα (-ματ) ποίημα; the abstract act, λόγος, χάρις, ἐλπίς; passive object, βεβήμενος, κρήδεμνον; abstract defined by the root, κράτος (-ες).

Adjectives neuter and passive, λαμπρός, ἐκλιπής (-ες) failing, φιλητός loved, φιλητέος (-τεFιος, Sanskrit -taviṃ (37), to be loved), σεμνός (σεβνός), στυγνός, δειλός timid, σιγηλός silent, μιαινός impure, μνήμων (-μων) mindful, πειθάνος persuasive.

*Nominal stems derived from nominal stems.*

Patronymics masculine, Κρονίδης, Ἀτλαντιάδης, Κρονίων, Ἀκρισιωνίδης, Ἰαπετιονίδης; feminine, Νηρηΐς (-ίδ), Ἀδραστινή, Ακρισιώνη, κυνίδεις young of dog.

Diminutives of substantives, -ίσκος, -ίσκη, -ίσκιον, -ίδ; -ίον, -ίδιον, -άριον, -ύλλιον, -ύφιον, -άσιον, -αίον, -υλος, -ίχνη, -ίχμιον. Amplificatives, -ων, -άδ. Feminines, θέαινα-, βασίλισσα. Locals, -ών, -εών, ἀνδρών, man's apartment, περισσερεών dove-cot.

Substantives from adjectives, σοφία, ἀλήθεια, παχύτης, δικαιοσύνη, ἱερωσύνη.

Adjectives from substantives, ἀργύρεος, δυράνιος, ἀνθρώπιος, πατρῷος, μητρῷος, ἀνθρώπινος, ἀνθρώπινος, πεδινός, σκοτεινός, ξύλινος, ἑσπερινός,

<sup>1</sup> Bopp, Vergl. Gram., sect. 753.

<sup>2</sup> Ibid. sects. 763, 769.

πόσιμος drinkable, ἀγχονιματος by strangling; θαρσάλεος courageous, ἐτήσιος yearly; δημόσιος, μηκεδανός tall, πευκεδανός keen, σιδηρῆτις, σιδηρῆτις (-ιδ) of iron, κυρῆτις, μοιρῆτις πετρεῖς stony, ανεμόεις windy, (-Fεντ, Sanskrit -vant, 35); Gentile, -ός, -ιος, -σιος, -κός, -νός, -της; from prepositions, περισός, ἐπισσός, μετασός; from adjectives, ἥδυμος, νήδυμος, νεόκοτος, ἀλλόκοτος, νηπίαχος, μοναχός, μονάς (-αδ).

78. There is great facility of composition in Greek, but there is nothing like those coalitions of words forming a member of a sentence which are so frequent in Sanskrit. The Greek compounds are words forming part of the vocabulary of the language, and they consist of two components. The Sanskrit compounds arise from the prevailing interest of the whole fact, which combines the members; the Greek from the interest of the members leading to a fulness in conceiving them.

The verbs compound only with prepositions; and the combination is so loose that the augment generally intervenes. This shows that in thinking them the mind passes from one component to the other, instead of spreading into the second without leaving the first.

In the Greek compounds, there is usually a connective element between the two components. If the first component be verbal, the connective element is σι, εσ, εσι, σο, ε, ο, or ι, unless the second begins with a vowel, for then the connective is absorbed or reduced to σ; if the first component be nominal the connective element is ο or ι subjoined to its root, or the formative element of the nominal stem acts as a connective. The former connectives are abstract verbal elements, the latter pronominal. The lengthening of an initial vowel of a nominal stem after an adverb compounded with it is probably expressive of a verbal element of thought which is too light to produce a distinct vowel.

79. The acute accent in Greek may affect either a long or short vowel, including under that term a diphthong, the circumflex only a vowel long by nature. The former cannot go farther back than the antepenult, nor the circumflex than the penult; but the last syllable generally counts for two in reference to an acute accent, if it be in itself long by the nature of its vowel, or by its ending in concurrent consonants, and in reference to a circumflex if it be long by the nature of its vowel. The inflections at the end of words are strongly thought so as to suggest strong volitions of utterance, and if a syllable be long it requires a stronger volition, and in proportion to the strength of the volition of utterance of a syllable it tends to draw towards it that point in the word where the sense of volition of utterance of the word is a maximum (Def. 27).

In applying the above rule, αι and ω at the end of a word are not considered long except in the third singular optative; doubtless in consequence of a comparative lightness in the element of thought which they express.

But the accents do not always go back as far as they might. Thus in the participles of the second aorist active, of the first and second aorist passive, and of the perfect active, the strength of significance of the participial syllable compared with the preceding syllables attracts the accent. And in general the accent is drawn towards the end, either

by the strength of the end, or by the beginning being weak because it does not involve a sufficient sense of the whole word owing to deficient unity in the word.

If the penultimate be long by nature and have the accent, it is the circumflex, but a long ultimate may have either accent ; perhaps the accent is stronger, because there is more sense of the entire word in the former than in the latter.

## LATIN.

80. Latin is less vocal than Greek, though it has a similar development of vowels, whose correspondences to the Sanskrit vowels are much the same as those of the Greek. Diphthongs are less frequent in Latin than Greek.<sup>1</sup> And there is not the same tendency to prefix and insert vowels, or to absorb consonants into vowels ; but, on the contrary, the vowels are apt to be reduced when a word is increased by composition or reduplication, as *abjicio conculco cecini*, which close the radical *a* to *i* or *u*. Mute consonants also, which are never at the end of a Greek word, are frequent as finals in Latin ; and particles, prepositions, and inflections are apt to drop a final vowel or shorten a long vowel before a final consonant.<sup>2</sup>

There is less muscular tension, more softness of utterance, in Latin than in Greek ; *h* is softer than *χ*, to which as an initial it corresponds, and *m* than *μ* or *ν*, for *m* final or *h* initial does not save the last vowel of a word from elision in verse ; *r* often represents an original *s* ; and the want of *θ* and *ζ*, which are uttered with more compression than *h*, *f*, or *v*, seems to indicate less muscular tension than in Greek.

There is also less versatility or ready change of utterance. The following concurrences in the beginning of a word, which are all in Greek, are unknown in Latin—*bd*, *dr* except in foreign words, *dn*, *tl*, *mn*, *pn*, *pt*, *tm*, *kt*, *km*, *sm*, *kn* except in *Cneus*, and the mixed consonants *x* and *ps*. Still more remarkable are the restrictions within a word, for there the utterance of concurrent consonants is facilitated by the division of syllables ; yet within an uncompounded word many of the concurrences which might be regarded as the easiest, consisting of a mute and a liquid, are almost unknown. Thus *dr* seems to occur within such a word only in *quadrans*, *dodrans*, and the derivatives of *quadr*-, as *quadrus*, *quadraginta*, &c. ; *gl* seldom or never except in foreign words ; *cl* perhaps only in *Cocles*, and such poetic forms as *poelum*, *saechum* ; *ld* only in *valde* for *valide*, and *caldus* for *calidus* ; *bl* only in *Publius Publilius* ; *cn*, *pn*, *dm*, *dn*, *tm*, *tn*, *tl*, not at all. It is strangely in contrast with these restrictions, that in the end of a word Latin has greater freedom in the use of consonants and of consonant concurrence than any of the ancient languages akin to it, as *amat*, *amant*, *arx*, *lanx*, *nec*, *ars mons*.<sup>3</sup>

Now, in the beginning or middle of a word utterance is stronger

<sup>1</sup> In the proportion of one to six, according to Förstemann, in Kuhn's Zeitschrift, i. p. 171.

<sup>2</sup> Benary, *ibid.* i. p. 52.

<sup>3</sup> Benary, *ibid.* i. p. 51.

than at the end, and therefore the transitions of utterance require more versatility because the changes of action are greater. A mute followed by another consonant needs prompt change of action, because it is a momentary utterance; but *r* was lightly uttered, and consequently required less new action; *mn* in the beginning and *ld* required quick change of utterance to make the transition distinct between two consonants so like to each other, so that the above restrictions of concurrent consonants in the beginning and middle of words seem to be the effect of deficient versatility in the organs of speech. In the end of a word the force of utterance declines, and there consonants may concur without requiring such versatility, because utterance is weaker and less distinct. Their concurrence, however, shows a more versatile utterance than Sanskrit, a less vocal, more consonantal speech than Greek.

Latin uses surd spirants for the medial aspirates of Sanskrit, but within a word a medial is apt to be used instead of the spirant by reason of the sonancy of the word, and the tendency to soft utterance.

Being less vocal than Greek, and softer in its consonant utterance (60), Latin is more tolerant of the semi-vowels *y*, *v*, and *w*, as *abiete*, when pronounced *abyete*, *tenuis* when pronounced *tenwis*; *qu* is *qw*.

It is probably owing to greater force of breath from the chest that Latin often has *q* or *c* where Greek has  $\pi$ . In such words there originally stood *qw*, and as Greek gave up the *w*, the guttural needed more breath from the chest to utter it (see V. 75) than belonged to Greek speech, for it was not *k*, but *q*. The pronunciation consequently passed from the throat, and *w* tended towards its labial closure, and the *q* became *p*. In Latin, on the other hand, the guttural remained even when the *w* was given up.

81. The case endings of the Latin noun, compared with the older forms, are as follow :

	Stem ending.	= Sans. <i>a</i> .	= Sans. <i>a</i> fem.	Consonant.	<i>i</i> , <i>u</i> .
SINGULAR.	Nom.	<i>u's</i> , S. <i>a's</i> , <i>er</i> , <i>r</i> = <i>ras</i>	<i>ǎ</i> , ( <i>i</i> ) <i>ē's</i>	<i>s</i> , <i>o</i> , <i>r</i>	<i>s</i>
	Accus.	<i>u'm</i> , S. <i>a'm</i>	<i>a'm</i> , <i>e'm</i> , S. <i>ām</i>	<i>em</i> , S. <i>am</i>	<i>m</i> , S. <i>m</i>
	Neut.	<i>u'm</i> , S. <i>a'm</i>	—	—	—
	Gen.	<i>i</i> , S. ( <i>as</i> ) <i>y(a)</i> , <i>i</i> long for com- pensation	<i>a'e</i> , <i>ē'i</i> , S. <i>āy(ās)</i>	<i>is</i> , S. <i>as</i>	<i>s</i> , S. <i>as</i>
	Dat.	<i>ō</i> , S. <i>ā(ya)</i>	<i>a'e</i> , <i>ē'i</i> , S. <i>āy(āi)</i>	<i>ī</i> , S. <i>ē</i>	<i>ī</i> , S. <i>ē</i>
	Abl.	<i>ō</i> , S. <i>ā(t)</i>	<i>ā</i> , <i>ē</i> , old <i>ā(t)</i>	<i>ē</i>	<i>i</i> , <i>u</i>
PLURAL.	Nom.	<i>i</i> , old ( <i>a</i> ) <i>y(as)</i> (9)	<i>a'e</i> , <i>ēs</i> , S. <i>ās</i>	<i>es</i> , S. <i>as</i>	<i>es</i> , <i>us</i> , S. <i>as</i>
	Accus.	<i>ōs</i> , old <i>a'ms</i>	<i>ās</i> , <i>ēs</i> , old <i>āms</i>	<i>es</i> , S. <i>as</i>	<i>es</i> , <i>us</i> , S. <i>n</i> mas- culine, <i>s</i> femi- nine
	Neut.	<i>ā</i> , S. <i>ā(ni)</i>	—	<i>a</i>	<i>a</i>
	Gen.	<i>ōrum</i> , old <i>āsam</i>	<i>ārum</i> , <i>ērum</i> , old <i>āsam</i>	<i>um</i> , S. <i>ām</i>	<i>um</i> , S. <i>ām</i>
	Dat.	<i>īs</i> , S. ( <i>ēb</i> ) <i>y(a)s</i>	<i>īs</i> , <i>ēbus</i> , S. <i>āb'yas</i>	<i>ibus</i> , S. <i>b'yas</i>	<i>bus</i> , S. <i>b'yas</i>
	Abl.	<i>īs</i> , S. ( <i>ēb</i> ) <i>y(a)s</i>	<i>īs</i> , <i>ēbus</i> , S. <i>ab'yas</i>	<i>ibus</i> , S. <i>b'yas</i>	<i>bus</i> , S. <i>b'yas</i>

The vocative singular is like the nominative except when this ends in *-us*, the vocative being then the bare stem, whose final vowel has enough life except for *deus*.

The Sanskrit vocative takes up an element of life more than the Greek, the Latin more than either.

The Oscan ablative singular in all the declensions ended in *d*<sup>1</sup> (50).

Stems in *i* are apt to follow the analogy of consonant stems, and make the accusative singular in *em* instead of *im*; less frequently they form the ablative singular in *e* instead of *i*. Many of them have lost the *i* as neuters in *e*, *ar*, *al*, some of which originally belonged to adjectives in *-is*, *-ris*, *-lis*. Adjectives whose stem has not *-i*, but ends in a consonant, show a tendency to follow the analogy of those which have *-i* in consequence of its prevalence in adjective stems. Thus adjectives in *-ans* and *-ens* when used as adjectives form the ablative in *i*, but when used as substantives or as participles prefer *-e*.<sup>2</sup> They always take *i* before the case ending in the genitive plural, and in the nominative accusative plural neuter.

Substantives whose stems end in two consonants tend also to take *i*, perhaps because they originally took it in the nominative singular to sound *s*, as *mons*, *mouts*, originally *montis*. Of the stems in *u*, all but a dozen follow the stems in *i* and in consonants, and make the dative and ablative plural in *-ibus* instead of *-ubus*.

The demonstrative pronouns and the adjectives *unus*, *totus*, *solus*, *ullus*, *nullus*, *uter*, *neuter*, *alter*, *alius*, form the genitive singular in *-ius*, and dative in *-i* for all genders. These have less sense of their substantive than is possessed by adjectives in general; for they are either of a singling or a pronominal nature, and do not involve a comparison of their substantive with others of the same name (Def. 6) so as to emphasise the thought of it in distinction from them, but rather direct attention to it alone (Def. 7). Hence the genitive and dative endings overpower the final vowel of the stem corresponding to Sanskrit *a*, which expresses the sense of substance (8); and the former has the fuller form corresponding to an older *yas* (9). The nominative and accusative endings are lighter, and consequently tend less to curtail the stem (14), and the old ablative being formed with *d* preserved the final vowel because it needed it for a connective.

82. The endings of the degrees of comparison of adjectives in the Indo-European languages have a strong affinity with the endings of the ordinal numbers, and these illustrate the significance of the former. In Sanskrit, *dvītiya* second, and *trītiya* third, are thought with a sense of increase like the comparative degree *īyans*, but *k'atur-ta*, fourth, singles out more specially, because from a larger number, the last individual reckoned, denoting it with a demonstrative element *ta*. In *pañcama*, fifth, there is a stronger sense of five as a combined aggregate, and the individual that completes the aggregate is denoted by *ma* (13). The strong aggregation of five diminishes that of six, so that *ṣaṣ-t'a*, sixth, goes back to the demonstrative ending, but the higher numbers take *ma*. Now these ordinal endings *ta* and *ma*

<sup>1</sup> Bopp, Vergl. Gram., sect. 181.

<sup>2</sup> Zumpt's Latin Gram., p. 53.



belong also to the superlative endings, and in that use express a similar idea, denoting the individual which completes the process of increase. The process of increase itself, originally, it would appear, expressed by *īyans* (9), may denote the comparative degree as in Sanskrit, whence *-iav*, Latin *ior*; but it expresses this more distinctly with an addition *īyās'tara*, whence Sanskrit *-tara*, Zend *-stara*, and Greek *-έσπερος*, *-ίσπερος*, *-ώπερος* (penultimate of positive being generally short), *-τερος*. And when this element *īyās* or *īyās'tar*, or dropping *r*, *iyasta*, takes, like a cardinal number, the ordinal endings *ta* and *ma*, it gives for superlative endings *iyasta* or *iyasta'ma*, whence Sanskrit *-iṣṭ'a*, *-tama*, Zend *-stema*, Greek *-έστατος*, *-ίστατος*, *-ώτατος*, *-τατος*, Latin *-essimus*, *-simus*, *-timus*.

The Latin comparative makes its neuter *-ius* like Sanskrit *-īyas*.

83. The personal pronouns correspond generally to Sanskrit.

Nominative . . .	<i>ego</i> , Sans. <i>aham</i>	<i>tu</i> , S. <i>twam</i>
Genitive . . .	<i>mei</i> , <i>ma(s)y(a)</i>	<i>tui</i> , <i>twa(s)y(a)</i>
Dative . . .	<i>mihi</i> , S. <i>mahy(am)</i>	<i>tibi</i> , S. <i>tub'yan</i>
Accusative . . .	<i>mē</i> , S. <i>mū</i>	<i>tē</i> , S. <i>twā</i>
Ablative . . .	<i>mē</i> , S. <i>mat</i>	<i>tē</i> , S. <i>twat</i>
Nominative . . .	<i>nos</i> , <i>nas</i>	<i>vos</i> , <i>vas</i>
Genitive . . .	<i>nos'trum</i> , S. <i>nas</i>	<i>vestrum</i> , S. <i>vas</i>
Dative . . .	<i>nō'bis</i> , S. <i>nas</i>	<i>vō'bis</i> , S. <i>vas</i>
Accusative . . .	<i>nos</i> , S. <i>nas</i>	<i>vos</i> , S. <i>vas</i>
Ablative . . .	<i>nō'bis</i>	<i>vō'bis</i>

The genitive plural, *nostrum*, *vestrum*, involves a genitive element *tr*, akin to *-tris*, &c., the formative of adjectives, and the *um* of the genitive plural (13).

The demonstrative *hi*, which is analogous to the relative *qui*, is strengthened with *c*, an abbreviation of *ce*.

The neuter is expressed by *d*, analogous to Sanskrit, which, however, affects the root; but in *hic* the *d* is displaced by *c*.

84. The conjugational element in the Latin verb differs from the conjugational element of the Sanskrit verb in being less limited to the present, and in being thought with less fulness of particularity. It is the process of accomplishment rather than that of the being or doing of the subject that it expresses, for it belongs to the parts in which accomplishment is not complete, the future, the infinitive, and the gerund, as well as to the present and imperfect; whereas the perfect tenses and the nominal formations in *-t-* which think the accomplishment in its totality have not properly the conjugational element. This being the nature of that element, it is brought out less strongly by the present experience of the subject. In most verbs of the first conjugation the *a* has become part of the stem so as not only to pervade the verb, but also to be carried into the derived nouns, but in a dozen verbs like *sono*, *sonui*, *sonitum*, the *a* is confined to the parts of incomplete accomplishment. The second conjugation, which corresponds to Sanskrit fourth, retains enough conjugational movement in the perfect tenses and the *t* formations to form both

with an initial vowel, as *-ui*, *itum*, &c., except five which make *-tum*. The third conjugation, which corresponds to Sanskrit second, has enough movement for the short vowel in the present and infinitive, but forms the perfect tenses and the *t* formations on the root. The fourth conjugation carries the *i* throughout the verb, like the Sanskrit causatives and tenth conjugation, and into the derived nouns; but in about a dozen verbs, which correspond probably to the Sanskrit fourth conjugation, the *i* is confined to the parts of incompletion, the other parts being formed on the root. To these correspond some twenty seven verbs of the second conjugation, which form the latter parts in the same way. The verbs in *-io* of the third conjugation, like *capio*, *quatio*, seem to be formed with a short *i* changeable to *e*, whereas the *i* of the fourth conjugation is long, except before vowels or final *t*, and corresponds to Sanskrit *ya*.

The inchoative element *-sc-* is by its meaning limited to the parts of incomplete accomplishment; and *n* in *cerno*, &c., is limited in the same way.

85. The person endings are the same throughout the active voice except the first singular, which in the present and in the tenses which have its person endings is vocalised to *o*, and in the perfect is absorbed in the tense element, the second singular, which in the perfect is *tī* (87), and the persons of the imperative, in which *-to* = Sans. *-tu*, *-te* = Sans. *-ta*, *-tote* = *-to* pluralised by *-te*.

In the passive and deponent verbs the person endings subjoin *r*, which is thought by Bopp<sup>1</sup> to be a reflexive element, and which must have a significance of that kind expressing a sense of the person as quiescent. The second singular transposes *s* and *r*, and has another form *-re*, which probably corresponds to Sanskrit *-sē*.

86. The imperfect and the future are formed with a verbal element *b*, which has probably a significance akin to *ḅ* in Sanskrit *ḅṛ*, Greek *φύω* (56). It is determined to the past by a past form *bam*, and to the future by a present form *bo*. In the past it takes a long vowel before it which expresses like, an augment, the remotion of the past. In the third and fourth conjugations, in which there is less sense of process of accomplishment, the third having scarcely any conjugational element, and the *i* of the fourth belonging rather to the stem, the future accomplishment gets a weaker expression, like that which is given to the future by the Zend subjunctive (52). In this form the long vowel expresses the remotion of the future. But a stronger expression is given to the remotion of what is merely ideal in the present potential by *a*, which in the second, third, and fourth conjugations is like Sanskrit *yā*, whereas *e* in the first is like Sanskrit *ē*.

87. The formative element of the perfect has three forms, *sīs*, *vis* or *uis*, and *is*. In the pluperfect and future perfect indicative, and in the perfect potential, the *i* of this element becomes *e*, and the *s* becomes *r*, but in the pluperfect potential both are preserved. After a vowel *vis* is used; and in the second conjugation the conjugational vowel enters into *v*, and vocalises it to *u*, but when the *e* is radical it

<sup>1</sup> Bopp, Vergl. Gram., sect. 476.

remains, and is followed by *v*. When the stem takes up into itself a sense of the tense, and expresses it either by reduplication or by lengthening its vowel, the tense element is weakened and reduced to *-is*, as in Sanskrit it is reduced when the stem takes up the past (27). This element with the person endings would be, *-sism*, *-sisis*, *-sisit* or *-sist*, *-sismus*, *-sistis*, *-sisunt*; but Latin was not favourable to *s*, and after the first *s* the second was readily given up or changed. In the first person *m* was dropped, as *v* was dropped in the Greek first aorist, and *s* was vocalised, so that it became *sī*; in the second person also the final *s* was vocalised, so that the ending became *sīsī*, and it compensated for the person from the analogy of the second plural by inserting *t*, so that it became *-sistī*; in the third singular and first plural the second *s* was dropped; and in the third plural the tense element was Gunated, the second *s* becoming *r* between the vowels, because the third person plural is so heavy and objective that the perfect takes up a sense of extension in being affected with it. The use of *sis* and *vis* being determined by euphonic causes, these elements seem to be convertible into each other by contact with consonant or vowel, as if they were different utterances of the same word. Yet it is not into *v*, but into *r*, that *s* turns in Latin when it is relaxed by contact with vowels. Also *sis*, as significant of the past, seems to be of the nature of a reduplication (27). Could it have been originally *svis*, abbreviated from a doubled root *svi*? One may often observe in Sanskrit a series of roots slightly differing from each other and expressing the same idea. And it is a fact which perhaps has not been sufficiently noted by philologists, as it seems often to render probable the supposition of other roots, originally existing in the primitive language, akin to those which are still found, and from which words may have sprung, which cannot be deduced from the latter consistently with phonetic laws. Such a series is *su*, *sū*, *sūs*, *χūs*, all meaning to bring forth or produce, and akin to these is *χ'vi* to swell, whence *χ'vī* offspring (see also 117). There is no root *svi* like *χ'vi*; but there is *viś*, and a nominative plural *vīś*, which is usually derived from *su*, by supposing *i* to be a suffix; and there is *īn*, son or daughter, and Norse *sveinn* boy, which are derived from the same root, but this is done by making *īn* consist of nothing but suffix (*sv*) *in* *i*'s;<sup>1</sup> and it seems much more probable that these words came from a root *svi*. Such a root doubled might be used to express production completed, what has been accomplished; and in the inevitable abbreviation of such a formation, *svi**svi* would lose its last syllable, so far as this was not necessary for retaining reduplication, and become *svi*. This might furnish both *sis* and *vis*, the former as a reduplication syllable coming from a doubled root, and the latter produced by a preceding vowel relaxing and weakening *s* (159).

88. The verbal element *s*, which is in the first aorist in Greek, is to be observed in Latin also similarly used, but changed into *r* between vowels. Thus in *amares*, *-res* = *-σαις*, and in *amavisses*, *-ses* = *-σαις*. In the infinitives *amare*, *amavisse*, the last syllable = the Vedic

<sup>1</sup> Curtius, Gr. Etym., pp. 397, 398.

-*se*, the last syllable of the dative<sup>1</sup> of a stem ending in *s* (57). In *amasso*, the old form of the future perfect, contracted from *amavisso*, *so* is equivalent to *σω* of the Greek future; *amaveram* adds to the perfect the *a* of the past, and *amaverim* the *i* = Sanskrit *ya* of the potential.

In the passive second plural the participle in -*mīnas* Sanskrit, -*μενος* Greek, is preserved in the plural, and is moreover formed on the stems of the present and imperfect of both moods and of the future indicative.

The infinitive passive ended originally in -*rier* = -*reer*, the reflexive element subjoined to the infinitive active.<sup>2</sup>

The present and past participles correspond to Sanskrit.

The supines are the accusative and ablative of the verbal noun in *tu* (29); whence also comes the participle -*turus*, *r* expressing the development of the future. In -*ndus* the *n* expresses a going on as of incompletion, as in *nt* of the present participle, but *d* expresses less force than *t*, being a relaxation of the tenuis (74).

The normal order in Greek and Latin was subject, conditions, object, verb, but with freedom of change.<sup>3</sup>

89. Derivative verbs are formed like the following :

Frequentative, *clam'ito*, *curso*, *dicto*, *cur'sito*, *dict'ito*.

Desiderative, *emptā'rio*, *partū'rio* (34).

Diminutive, *sorb'ill'are*, *conscrib'ill'are*.

Inchoative, *lab'asco*, *pall'esco*, *ingem'i'sco*, *obdorm'i'sco*, *puer'a'sco*, *mature'sco*.

Denominative, *flor'eo*, *num'ero*, *alb'eo*, *aemul'ari*, *gracc'ari*, *clarr'igo*, *nav'igo*, *mit'igo*, *mob'il'ito*, *latro'cinor*.

Derivative nouns are formed like the following :

Agent, *victor*, *vict'rix*, *aleator*, *lud'or*, *conviva*, *erro*, *lud'io*, *nav'ita*.

Action or state, *pav'or*, *fur'or*, *cap'i'o*, *mot'io*, *act'io*, *mot'us*, *act'us*, *cultura*, *quer'ela*.

Also the following: *gall'ina*, *reg'ina*; *pect'en*, *flum'en*, *velamen*, *reflu'amen*, *albu'men*; *velamentum*, *offer'ūmentum*, *fac'i'nor*, *it'iner*; *venabulum*, *tur'ibulum*, *veh'iculum*, *cing'ulum*, *inducula*, *sepul'crum*, *ventila'brum*, *candela'brum*, *illece'bra*, *aratrum*, *mule'tra*, *col'um* strainer; *es'ca*, *pos'ca*; *patr'onus*; *ru'ina*; *eff'igies*; *gaud'ium*; *ori'go*, *confluges*; *cup'ido*, *lib'ido*; *puer'ulus*, *fili'olus*, *line'ola*, *frater'culus*, *ram'usculus*, *ran'unculus*, *hom'unculus*, *hom'uncio*, *oc'ellus*, *lib'ellus*, *sig'illum*, *leg'uleyus*; *front'o*, *lab'eo*; *colleg'ium*, *consort'ium*; *reposit'orium*, *promptuari'um*, *gran'arium*; *quer'etum*; *bov'ile*, *sed'ile*; *senect'us*; *consul'atus*, *exsul'atus*, *pedit'atus*; *client'ela*; *cupid'itas*, *anxi'etas*; *audacia*, *pauper'ies*; *sancti'tudo*; *sancti'monia*; *patri'monium*; *just'itia*, *dur'ities*; *pinguedo*.

Derivative adjectives: *errabundus*, *iracundus*, *rotundus*, *calidus*; *nocuus*; *eg'enus*; *fertus*, *fertile*; *mord'icus*, *cad'ucus*, *hi'ulcus*; *amabilis*, *doc'ilis*, *fert'ilis*; *pugnax*, *aud'ax*; *integ'er*, *satur*; *taciturnus*, *bib'ulus*, *cred'ulus*; *supercac'aneus*, *succid'aneus*.

<sup>1</sup> Bopp, Vergl. Gram., sect. 854.

<sup>2</sup> Ibid. sect. 855.

<sup>3</sup> Kühner, Gr. Gram., sect. 348; Zumpt, Latin Gram., p. 528.

From substantives: *ferreus, aureus, eburnus, eburneus; civicus, bellieus; civilis, hostilis, virilis, aquatilis; chartaceus, papyraceus; tribunicius; letalis lectuialis; consularis; natalicius; medicus; muliebris, funebris; campestris; honestus; domesticus; intestinus; amatorius; regius; honorus; imbellis; caninus; cedrinus; ostiarius, molendarius; aquosus; montanus; montaniosus; fraudulentus; rotivus; hesternus, aeternus, longiternus; diurnus, nocturnus; finitimus, maritimus, legitimus; auratus, turritus, calceatus.*

From other adjectives, diminutives are formed in *-ulus, -olus, -culus, -ellus*; from names of places adjectives are formed in *-ensis, -inus, -at-*, and *-ānus*; and from names of nations in *-icus, -ius*.

90. There are causative verbs formed with *facio*, as *patefacio*; there are no other verbs formed by composition except with prepositions.

91. The accentuation of Latin differs somewhat from that of Greek. Words of two or more syllables never have the accent on the last syllable; but the accent, as in Greek, never goes farther back than the antepenult. The accent of a monosyllable is circumflex, if the vowel be long by nature and not merely by position. If the penult be accented it is the circumflex that is used if the penult be naturally long, and the last syllable be short, otherwise it is the acute. The accentuation of antepenult requires that penult be short.<sup>1</sup>

## CELTIC.

92. Celtic speech was from ancient times divided into two languages, which may be called Irish and British. These differed from each other more than any of the Teutonic languages, though not so much as Lithuanian and Slavonic.<sup>2</sup> The Irish language includes the Gaelic of Scotland.<sup>3</sup> The British includes Welsh, Cornish, and Armorican or Breton;<sup>4</sup> and from the language of the Britons that of the Gauls differed little, according to Tacitus.<sup>5</sup> This probably implies that the Gauls and Britons could understand each other,<sup>6</sup> and all the remains of the language of the former confirm the supposition of such close correspondence.<sup>7</sup>

In the Celtic languages, more than in any others of the Indo-European family, speech is vocal, and the consonant is slighted in comparison with the vowel; so that the weakness of the consonant and the predominance of the vowel characterise all Celtic speech. This common character, however, is combined with a certain difference existing between the Irish branch and the British, which has caused the decay of the consonants to follow somewhat different laws in these two branches.

The pronunciation of the Irish consonant betrays a tendency rather to indolent utterance, that of the British rather to soft utterance. The former tends to neglect to close the organs, so that the breath is suffered to pass through; the latter to close the organs softly and

<sup>1</sup> Zumpt, Latin Gram., pp. 22, 23.

<sup>3</sup> Ibid. p. 8.

<sup>4</sup> Ibid. p. 9.

<sup>2</sup> Zeuss, Gram. Celt., Preface, p. 5.

<sup>5</sup> Agricola, sect. 11.

<sup>7</sup> Ibid. p. 5-7.

with gentle pressure of breath. The former, in uttering a consonant after a vowel, only half performs the required act of utterance. The latter, in uttering consonants which concurrence tends to harden, relaxes the muscular tension in a gentler contact, which gives a sense of softness; while the breath is sounded in the throat rather than pressed on the organs of the mouth.

93. The vocal character which belongs to all the Celtic languages is to be seen in the frequency of diphthongs and of what may be called semi-diphthongs, and in the way in which the vowel dominates over the consonant which is in contact with it, so that the vowels on either side of the consonant or consonants tend to affect each other with mutual assimilation. Thus in Irish, "every consonant, whether in its primary or aspirated state, has a broad or a slender sound, according to the nature of the vowel which it precedes or follows. When it precedes or follows a broad vowel it has always a certain fixed broad sound, and when it precedes or follows a slender vowel it has a fixed small or slender sound, which will presently be described. This influence of the vowels over the consonants has given rise to a general rule or canon of orthography which distinguishes the Irish from all the European languages, namely, that every consonant or combination of consonants must always stand between two broad vowels or two slender vowels."<sup>1</sup> The broad vowels are *a, o, u*, the slender *e* and *i*. The slender utterance of the consonants is that which they get by incorporating with them *y* immediately after them (Def. 29, 30). This makes the post-palatals palatal and the dentals ante-palatal; on the labials it produces less effect.<sup>2</sup> But if, according to the above, this effect is real, then the above rule is not a mere rule of writing, but a law of utterance; and when it was not observed in writing, the writing was not orthography, as it did not correctly represent the utterance.

Sometimes, in accordance with this law, a broad or slender vowel is introduced next to the consonants, to be lightly uttered in connection with the vowel of the syllable and to correspond with the analogous vowel on the other side of the consonants. Sometimes it enters into the vowel of the syllable and changes it, making it slender or broad as the case may be.

In the southern parts of Ireland the simple vowels are apt to get a diphthongal or semi-diphthongal utterance by virtue of the predominance of the vowel over the consonant. This happens before consonants which require much breath, the vocalisation being carried on with the initial breath of the consonants, and the vowel becoming closer as the organs close to utter the consonants. Thus *a* before *m*, *ll*, *nn*, or *ñ*, in monosyllabic words, and before *nt*, *ns*, in the first syllable of disyllables, is pronounced in the southern half of Ireland like the German *au* or nearly like the English *ow* in *how*, and *a* before *ʃ*, like *ou* in *ounce*; <sup>3</sup> *i* before *ll* and *ls* is pronounced, like *ei* (Eng. *ēce*), very slender in the south-east, but in the south-west like *ī* (Eng. *ee*); <sup>4</sup> *o* before *m*, *ll*, *nn*, in monosyllables, and before *g'* or *d'* in the first syllable of disyllables, is pronounced in the southern half of Ireland

<sup>1</sup> O'Donovan, Irish Gram., p. 3.

<sup>2</sup> Ibid. p. 28-39.

<sup>3</sup> Ibid. p. 10.

<sup>4</sup> Ibid. p. 12.

like *ou* in ounce.<sup>1</sup> For the strength which final consonants have in a monosyllable causes an increase of the breath required by the liquids compared with what they take in other positions. Nasalised or aspirated mutes in that position stop the breath too strongly for such an effect, but in other positions the more breathing ones produce it. In the other parts of Ireland the vowels retain their simple utterance.<sup>1</sup>

The above-mentioned rule of later Irish, "broad to broad, and slender to slender," is to be found exemplified, though not regularly observed, in the ancient Irish manuscripts. Sometimes it is the vowel preceding the consonants which infects (as Zeuss calls it) the vowel that follows them, and sometimes the vowel following infects the vowel preceding. In the former case *a* when infected becomes *ai* *e* or *i*, *e* becomes *ea* *a* or *o*, *i* becomes *e*, *o* becomes *oi* or *ui*, *u* becomes *ui*. In the latter case *a* becomes *ea*, *i* becomes *ai*, *o* becomes *eo*.<sup>2</sup>

There are also other infections not included in the above rule, that of *a* to *au* or *o* by *u* in the next syllable; that of *u* to *o* by *a* or *o* in the next syllable, and that of *e* to *ei* or *i* by *e* or *i* in the next syllable.

Sometimes the infecting vowel has been dropped, sometimes the cause of the infection cannot be found. And the variability in the vowels seems to have led to uncertainty and incorrectness in the spelling.<sup>2</sup>

The long vowels are subject to similar infections,<sup>3</sup> and from this cause, and also perhaps from the same cause which has occasioned the diphthongal utterance of the vowels in the south of Ireland, the long vowels are changed into diphthongs and triphthongs. For even vowels, which were short in ancient Irish, have become long before combinations of liquids or of *s* with other consonants.<sup>4</sup>

The vocal tendency, however, does not prevent radical vowels from being sometimes dropped in words which have got an increase in the end or the beginning; and verbal inflections of more than one syllable, and derivative elements, drop an initial vowel, unless they are preceded by a concurrence of two liquids or two mutes, or a mute with a liquid in the second place.<sup>5</sup>

The ancient Irish manuscripts distinguish the diphthongs from the infected vowels by accentuating the first vowel of the former.<sup>6</sup> The following diphthongs occur, *ai*, *ae*, *oi*, *oe*, *au*, *oo*, *oe*, *oi*, *ui*, *eu*, *eo*.<sup>7</sup>

94. The infection of the British vowels is the same as that of the Irish, and of scarcely less extent.<sup>8</sup>

The long vowels in British have undergone changes which seem to indicate a tendency to close them.

*Ā* has not been preserved in British, but has been changed in Welsh to *au*, which subsequently became *aw*, or when suffixes were added, *ō*; in Cornish to *ea*, *eo*, *eu*, *ey*; in Armorican to *ō*, *eu*, *ē*: *ē* has been preserved only in some Welsh examples; it has been changed in Welsh generally to *oi*, *ui*, *wy*; in Cornish to *ui*, *oi*, *oy*; in Armorican to *oi*, *oe*, *ui*, *oa*: *ī* remains, though sometimes changed in Welsh to *ei*: *ō* is found only in one or two examples, having generally become *ū*; and *ū* has generally changed to *ī*.<sup>9</sup>

<sup>1</sup> O'Donovan, p. 13.

<sup>2</sup> Zeuss, Gram. Celtica, p. 6-18.

<sup>3</sup> Ibid. p. 18-32.

<sup>4</sup> Ibid. p. 32.

<sup>5</sup> Ibid. pp. 33, 34

<sup>6</sup> Ibid. p. 36.

<sup>7</sup> Ibid. p. 36-42.

<sup>8</sup> Ibid. p. 95.

<sup>9</sup> Ibid. p. 110-118.

British has much the same diphthongs as Irish, except that in the second place they scarcely admit *o*, but have *u* instead.<sup>1</sup>

95. Already before the Roman times the old aspirates had generally become medials both in Irish and British, the breath being cut off from them, probably in that weakening of the consonants which has been mentioned as a characteristic of Celtic speech (92). Some few still remained;<sup>2</sup> but the only aspirate preserved in Gallic was the surd aspirate *f*.<sup>3</sup>

Afterwards changes came in the Celtic consonants, which, as they were due to the elements of utterance with which they came in contact, Zeuss has called infections.<sup>4</sup> They differ somewhat in Irish and British; and even when the effect on the consonant is the same in both, the different circumstances under which this identical effect is produced in Irish and in British show that the action which causes it is different in the two cases (107).

96. In old Irish, as in new, the liquids, when they stood singly between vowels within a word or after vowels at the end of a word, were uttered with an undecided closure of the organs, so that in uttering *m* the breath passed through, and it became a close *w*; the other liquids were not aspirated, but they were pronounced lightly.<sup>5</sup> In the end, however, of some words and suffixes *n* and *m* retain their full pronunciation though they follow a vowel and stand by themselves; which is doubtless due to some superior strength in their original form.

There are also in Irish peculiar laws in reference to *n*.

Within a word *n* is dropped before *s*, *f*, and the tenues, and a radical vowel preceding is lengthened, except the final *n* of *in*, and sometimes of *con* in composition, or that of a root which has a suffix beginning with one of those letters.<sup>6</sup>

The following words drop their final *n* before words beginning with *s*, *f*, or a tenuis, namely: *an*, the nominative and accusative singular neuter of the article, and its genitive plural *innan* or *nan*, the possessive pronouns of the three plural persons, viz., *am*, *barn*, *an*, the relative pronoun *an*, the prepositions *in* (in), *kon* (with), *ren* (before), *iarn* (after), the conjunction *aran* (that), and the numerals 7 to 10, which end in *en*.

The final *n* of these words becomes *m* before *b*, and before the liquids is generally assimilated to them.<sup>7</sup>

*N* when weakly uttered, if followed immediately by a vowel, becomes *nd*;<sup>8</sup> probably because the nasalisation fails, and the breath for sounding the vowel pressing forward through the mouth, catches the closure of *n* before it is opened, and *d* is pronounced. Sometimes, probably because a dental surd consonant has been dropped immediately after *n*, the closure is strengthened, and being carried on beyond the nasalisation, *t* is pronounced before a vowel, so that *n* becomes *nt*.

97. Of the spirants, the ancient Gallic language seems not to have

<sup>1</sup> Zeuss, p. 119-128.

<sup>2</sup> Ibid. p. 46.

<sup>3</sup> Ibid. pp. 88, 89.

<sup>4</sup> Ibid. p. 47.

<sup>5</sup> Ibid. pp. 51, 52.

<sup>6</sup> Ibid. p. 52.

<sup>7</sup> Ibid. p. 53, 54.

<sup>8</sup> Ibid. p. 55.



had *h* as a radical,<sup>1</sup> but it had *s* by itself and in *x*; the *x* being represented by *s* in Irish, by *h* and *χ* in British.<sup>2</sup> The original *h* was lost in Celtic, no doubt in the same weakening of the consonants which destroyed the aspirates (95).

As a radical, *h* is not found in Irish, but only as a breathing in the utterance of an initial vowel,<sup>3</sup> or the last state of an infected *l* (99).

*Y* has vanished from Irish, being absorbed into vowels; and *v* or *w* has disappeared from Irish, being absorbed into vowels in the middle and end of words, and changed to *f* in the beginning.<sup>4</sup> For when a consonant is lost in its softer positions it tends to be hardened in its harder positions, because it loses the softening associations of utterance connected with the former (60, 101).

*S* in the middle and end of words, except when doubled or joined with another consonant, is destroyed by the infection in ancient Irish; except in certain lengthened roots, and in certain formative elements.<sup>5</sup> In the former the length of the vowel probably caused its infecting power to become weak in the end of its utterance, and in the latter the significance of the *s*, or the original form of the element, may have given it strength to hold its ground. It must have been weakly uttered, or it would not have perished under infection (99).

Zeuss says that sometimes *s* is added for euphony, as before the article *in*, when it follows the truncated form of the verb substantive, and before the article *in*, *an*, *ind*, *naib*, *na*, following the prepositions *in*, *kon*, *ren*, *iarn* (which then drop *n*), or the prepositions *la*, *frí*, *tre*.<sup>6</sup> But how can *s* be added for euphony after a consonant which has then to be dropped for euphony? Is it not more likely that these are forms of the article strengthened with the Irish demonstrative element *s*?

*S* sometimes arises from *k* or *g*,<sup>6</sup> and this change is independent of the adjacent vowels. It is probably a case of the general consonantal weakening, which might specially affect the post-palatals, as the back part of the tongue acts with least facility, and lead them to give up the tension of the post-palatal closure; the utterance then becoming *s*, because there was no *h*.

The *h* which occurs in the modern dialects before initial vowels after the article *na*, or after prepositions ending in a vowel, is merely a breathing to distinguish the beginning of the word.

98. The medials are infected in Irish in the middle and end of almost all words when not doubled or combined with another consonant; the infection being that the closure of the organs is not complete, and the breath passes through, so that the consonant is uttered with an aspiration.<sup>7</sup>

In the ancient Irish manuscripts there appear also the beginnings of another infection of the medials, which in the later language spread more widely. These in the ancient language are nasalised and assimilated after a nasal in the middle or end of a word, except that *g* is written after *n*; but in the modern Irish, in the beginning also this assimilation takes place even with *g* after those words ending in a nasal which have been mentioned in 96.<sup>8</sup>

<sup>1</sup> Zeuss, p. 57.

<sup>4</sup> Ibid. pp. 60, 65–68.

<sup>7</sup> Ibid. p. 72.

<sup>2</sup> Ibid. p. 58.

<sup>5</sup> Ibid. pp. 60, 61, 63.

<sup>8</sup> Ibid. pp. 74, 76.

<sup>3</sup> Ibid. p. 59.

<sup>6</sup> Ibid. p. 61.

99. The *tenuis* likewise are infected with an aspiration in Irish in the middle and end of most words when not doubled or in concurrence with another consonant, except when *n* has been dropped before them, or they have themselves arisen from the coalition of two consonants; sometimes, after a long vowel (97), the *tenuis* remains uninfected, and always *t* of the second person suffixed or infix. The *tenuis*, when thus infected, were pronounced  $\chi$ ,  $\theta$ ,  $\phi$  in ancient Irish, but in modern Irish and Gaelic  $\chi$ , *h*,  $\phi$ .<sup>1</sup>

Another infection is suffered by the *tenuis*, but only in the later Irish and Gaelic, somewhat more in the latter than in the former. In the concurrences *rp*, *sp*, *st*, *sk*, in the middle or end of a word, and also when standing alone after a vowel in the middle or end of a word, the *tenuis* become medial. Sometimes this is prevented by the *tenuis* being doubled or preceded by a long vowel.<sup>2</sup> The weakness of *s* (97) affected the concurrent *tenuis*; and *r* too was weak so as to produce a similar effect, except when reinforced with a *tenuis* uttered with the tongue. After a vowel the sonancy was carried into the consonant, making it medial.

100. Consonants in the beginning of words also may suffer infection from the end of a word preceding, if this be brought into contact with them by close construction or composition. And in the ancient Celtic manuscripts, particularly the Irish, the substantive is written in one word with the article, with monosyllabic possessive pronouns, and with monosyllabic prepositions, and the verb with verbal particles.<sup>3</sup>

The general rule in Irish is, that an initial consonant is infected with an aspiration, if the preceding word, thus closely connected, end in a vowel, or if its more ancient form did so. Often also a preceding liquid has the same effect as a vowel, unless a vowel has been dropped after it;<sup>4</sup> probably because a liquid is so weak an utterance at the end of a word, though not so weak if it be or was originally at the beginning of a final syllable. This infection takes place<sup>5</sup> in the substantive and the adjective after the cases of the article, which are *in* or *n* before a consonant, *ind* or *nd* before a vowel; in a substantive which follows, in the genitive, a governing substantive which ends in a vowel or a liquid; after a numeral a pronoun or a preposition which ends in a vowel; after forms of the verb substantive, of whatever root, whether, as now found, they end in a vowel or a consonant; after active verbs, whether, as now found, they end in a vowel or a consonant, the word after the verb denoting the object; after the verbal particles *ro-*, *no-*, *ní-*, *nad-*, but *ro-* and *ní-* are followed by *b* of verb substantive, and *ní-* by *t* of second person uninfected;<sup>6</sup> after copulative or disjunctive particles; and after the interjection *a*.

In composition the initial consonant of the second word is infected in Irish; if it be a substantive compounded with another substantive, whether the latter end in a vowel or in a consonant, for there was originally a connective *o* between them; if it be a substantive, adjective, or verb compounded with an adjective; if it be a substantive or adjective compounded with numerals; after prepositions ending

<sup>1</sup> Zeuss, p. 77-81.

<sup>2</sup> Ibid. pp. 87, 88.

<sup>3</sup> Ibid. p. 192.

<sup>4</sup> Ibid. p. 196.

<sup>5</sup> Ibid. p. 196-198.

<sup>6</sup> Ibid. p. 195.

in vowels; also after *rem*, *kom*, and *tairm*; and after *so-*, *do-*, *mí-*, *neb-*, *aith-*.<sup>1</sup>

When final *n* has been dropped before an initial *s*, *f*, or tenuis (96), these remain uninfected in ancient Irish; <sup>2</sup> as does also initial *s* in the concurrences *st*, *st*, *sp*.<sup>3</sup> But in modern Irish the initial tenuis, before which final *n* has been dropped, is reduced to a medial,<sup>4</sup> and *f* to *v*.<sup>5</sup>

101. The British liquids are not infected in the most ancient manuscripts;<sup>6</sup> but in the more recent language they are weakened when they follow immediately another consonant in the middle or end of a word, *m* becoming then *u*, *v*, or *f*, and suffering this infection also after *a*; *l*, however, is not infected in *iarl*, a companion, nor is *m* of the first person;<sup>7</sup> *n* is dropped before *s* and *f*, and becomes *m* before labials and *n̄* (*ng*) before post-palatals.<sup>8</sup> The weakening of the liquids in their softer positions seems to have hardened them in their harder positions,<sup>9</sup> as in Irish *v* was hardened to *f* in the beginning of a word when it was vocalised in other places (60, 97). Hence the peculiar *ll* in Welsh.

102. The ancient Celtic had no *h* used as a radical, but only as a breathing (97). Its *s* has been in some words preserved in British both in the beginning and in the middle and end, and in other words since the time of the Romans changed to *h*, where Irish retains *s*.<sup>10</sup> *S*, followed by a tenuis, liquid, or *w*, occurs in the ancient British in the beginning of words, but the later Welsh prefixed always *e*, *i*, or *y*, which lightened the utterance of *s* by making it the closure of the vowel. Often, however, initial *s* is dropped before a liquid in Welsh, and initial *sw* changed to *hw* or *χw*.<sup>11</sup> Cornish and Armoric do not prefix a vowel to initial *sl*, *sn*, *sp*, *st*, *sk*.<sup>12</sup>

In many British words *h*, *χ*, correspond to an original *x*.<sup>13</sup>

*Y* has been preserved in the beginning of British words.<sup>14</sup>

In the British dialects *w* or *v* is represented by *gu*, *gw*, except in the end of words, where it has become *u*.<sup>15</sup> In later Welsh it is subject to the regular infections of *g*. Ancient Armoric preserved *w*, but the later language followed the same course as Welsh.<sup>16</sup>

103. The medials are not infected with aspiration in Welsh, either old or recent. But in the older books there are the beginnings of a weakening of the medials, *b*, and still more *g*, being liable to be dropped after long vowels, especially in the end, *g* sometimes after short vowels also.<sup>17</sup> In old Armoric the medials were more infected than in old Welsh, being vocalised or dropped in the middle and end of words, especially in the end after long vowels.<sup>18</sup> The medials in British were subject to alteration prior to any other class of consonants.<sup>19</sup>

In later British, as well in Cornish and Armoric as in Welsh, the medials are infected almost universally in the middle and end of words, the infection being a weakening of the closure of the organs,

<sup>1</sup> Zeuss, pp. 198, 199.

<sup>4</sup> Ibid. p. 200.

<sup>7</sup> Ibid. p. 133-136.

<sup>10</sup> Ibid. pp. 140, 144.

<sup>13</sup> Ibid. p. 146.

<sup>16</sup> Ibid. p. 150-153.

<sup>2</sup> Ibid. p. 194.

<sup>5</sup> Ibid. p. 201.

<sup>8</sup> Ibid. p. 137.

<sup>11</sup> Ibid. pp. 141, 142.

<sup>14</sup> Ibid. p. 148.

<sup>17</sup> Ibid. p. 157.

<sup>19</sup> Ibid. p. 155.

<sup>3</sup> Ibid. p. 195.

<sup>6</sup> Ibid. p. 129.

<sup>9</sup> Ibid. p. 130.

<sup>12</sup> Ibid. p. 143.

<sup>15</sup> Ibid. pp. 148, 150.

<sup>18</sup> Ibid. p. 153.

and an increase of the sonaney. This was variously carried out, and seems also to have been variously represented in writing, so that *b* became *f*, *u*, *v*, *w*; *d* became in Welsh *dd*, in Cornish *th*, in Armoric *z*; *g* became sometimes *i*, *y*, in the middle of a word after another consonant, but was generally omitted, which obliteration *b* and *d* also suffer sometimes in the middle and end of words.<sup>1</sup>

The assimilation of a medial to a preceding nasal in the middle and end of words, whereby *b* was absorbed into *m*, and *d* into *n*, began in the old British;<sup>2</sup> *g* continued to be written after *n*;<sup>3</sup> but did not *ng* then represent the post-palatal nasal *ñ*?

104. The *tenuis* in British were infected with aspiration prior to any other class of consonants;<sup>4</sup> always in Old British in the middle and end of words when doubled or after another *tenuis*; sometimes after *s*, generally after *r*, less generally after *l* (*t* after *l* either remains *t* or becomes *l*), in only one or two instances after *m* or *n*. The double *tenuis* became a single aspirate; in the combinations of two *tenuis*, the first became *i* or *e*, the second was aspirated, *t* aspirated was sometimes written as *dh*. The only infection of the *tenuis* known to Old British was aspiration.<sup>5</sup>

In the later British the *tenuis* were infected with aspiration under the same circumstances as in Old British; in *lk*, *rt*, *rk*, more frequently than in *lp*, *rp*.<sup>6</sup> Instead of *th* is sometimes written *d* (properly *dh*), sometimes *s* or *h* in Welsh;<sup>7</sup> sometimes *d* in Cornish, *z* in Armoric.<sup>8</sup>

In later British, and not previously, the *tenuis* first in the middle, afterwards also in the end of a word, become medials after a vowel when not combined with another consonant;<sup>9</sup> also *p* generally, and *k* always, after *s* in the modern language.<sup>10</sup>

It is to be observed that this change of *tenuis* into medials in the middle and end of words is to be found in Latin or Romance writings of the Continent prior to its appearance in British writings, and that the medials which have thus arisen undergo the same infections as other medials in the later language.<sup>11</sup>

*mp*, *nt*, are changed to *m*, *n*, like *mb*, *nd*, particularly in Welsh.<sup>12</sup> In modern Welsh no original *tenuis* remains in the middle of a word unless combined with another consonant.<sup>13</sup>

*F*, the only original British aspirate, occurs in the beginning, middle, and end of words.<sup>14</sup>

105. Consonants in the beginning of a British word are infected with aspiration by the end of certain words when in close construction or composition with it, according to the same rules by which aspiration takes place in the middle and end of words.<sup>15</sup> The words which have this effect in construction are the numerals *tri*, three, and *zwe*, six; certain possessive pronouns; the prepositions, *a*, which was originally *ak*, *tra*, originally *trak* or *tras*; the particles, *no* than, originally *nok*, *na* negative, originally *nak*, *ny*, originally *nyl*. Those which

<sup>1</sup> Zeuss, p. 159.

<sup>4</sup> Ibid. p. 169.

<sup>7</sup> Ibid. p. 180.

<sup>10</sup> Ibid. p. 184.

<sup>13</sup> Ibid. p. 176.

<sup>2</sup> Ibid. p. 167.

<sup>5</sup> Ibid. p. 170-172.

<sup>8</sup> Ibid. p. 182.

<sup>11</sup> Ibid. p. 185.

<sup>14</sup> Ibid. pp. 188, 189

<sup>3</sup> Ibid. p. 168.

<sup>6</sup> Ibid. p. 179.

<sup>9</sup> Ibid. pp. 183, 184.

<sup>12</sup> Ibid. p. 187.

<sup>15</sup> Ibid. p. 209.

have this effect in composition are in Welsh the numerals *tri*, *χwe*; the prepositions *a*, *tra*; the augmentative particle *gwer*, *gur*, *gor*.<sup>1</sup>

The infection whereby tenues become medials and medials are weakened or vocalised, affects these consonants in the beginning of a word, where they suffer the aspirating infection in Irish, namely, after preceding words in close construction or composition, which end or ended originally in a vowel; liquids also have sometimes the same effect as a final vowel.<sup>2</sup>

This infection takes place in construction after the article feminine singular through all the cases, after a substantive in apposition, after predicate if the verb substantive follow it, after the numeral two, after certain pronouns, after the verb substantive in Welsh, after a verb active, neuter, or passive sometimes in Welsh, after prepositions ending in vowels, after the conjunction *yn* that, in Welsh, after verbal particles, after interjections, after *neu* or, *ny na* not, *tra* as long;<sup>3</sup> in composition, with a preceding substantive, adjective, or numeral, with prepositions ending in a vowel, with the reciprocal particle of verbs, with inseparable prefixed particles.<sup>4</sup>

The nasal infection of medials and tenues in British, as it occurs in the middle and end of words in the older writings, prevails also in the beginning of words in construction or composition, in the later manuscripts, more in Welsh than in the other dialects. This infection takes place in construction after *vy* (*myn*) my, and after *yn* in; in composition after *an-* negative, after the preposition *ky* *kyn*, and with medials after *seith* seven, and *wyth* eight. The medials become *m*, *n*, *ng*, the tenues *mh*, *nh*, *ngh*.<sup>5</sup>

106. Now of these progressive changes of the consonants, those in which Irish and British agree are the change of tenues to medials (99, 104), and the absorption of medials into a concurrent nasal (98, 103); both which have been developed only in the later language. These are probably due to that predominance of the vowels and consequent weakening of the consonants which belongs as a common characteristic to both branches of Celtic.

107. The other changes must arise from causes which are quite different in the one branch from what they are in the other; for the conditions which favour them in the one hinder them in the other. Nor do the changes themselves seem to be quite of the same nature in the two when they are narrowly examined. The tendency in Irish, old as well as recent, is to utter all the consonants with an imperfect closure of the organs when they stand single after a vowel, slurring over the check to the breath by the consonant, when there is only one; but to give the full consonant utterance when there is a concurrence of two, the closure of the organs being then more marked and less liable to be neglected. The tendency in British is to reduce the tension of consonant utterance; and it comes into play where that tension is greatest, namely, in the concurrence of consonants. The tension consists of the muscular closure of the organs and the pressure of breath on them, and both are weakened in British; the relaxation

<sup>1</sup> Zeuss, p. 209-212.<sup>2</sup> Ibid. p. 212.<sup>3</sup> Ibid. p. 213-220.<sup>4</sup> Ibid. p. 220-223.<sup>5</sup> Ibid. pp. 223, 224.

of the former giving softness to the utterance, and the reduction of the latter giving sonancy, because the vocal chords are constricted to limit the current of breath, and they sound it as it passes. This increased sonancy and encroachment of the voice on the consonants distinguishes their infection in British from the aspiration which they suffer in Irish. Thus the double tenuis in British tends to become a medial aspirate; the first of two concurrent tennes tends to be replaced by a vowel; *s* before a tenuis is uttered with the help of a prefixed vowel; the tennes tend to be absorbed into a preceding nasal; and medials and liquids tend to be dissolved in the vocalisation. So that the nature of the change itself in the various elements, as well as the circumstances in which it takes place, shows that in British it is due rather to relaxed or soft utterance, in Irish rather to careless or indolent utterance. The indisposition to strong utterance appears also in British in the frequent substitution of *h* for *s* where *s* stands in Irish (102). And it is probably owing to this softness of consonant utterance that the semi-vowels *y* and *w*, when not vocalised, are less changed than in Irish or Greek (60), *y* being preserved in the beginning of words, and *w* in the beginning and middle being only partially closed into *gw* (102).

The same difference exists between Irish and British which has been noted in 80 between Latin and Greek. An original *qw* having changed the *w* for a vowel, retained the guttural in Irish, but changed it to a labial in British.<sup>1</sup> This is probably due, as in Latin and Greek, to a stronger pressure of breath from the chest in Irish than in British, for the utterance of a guttural requires this, unless it be followed by *w* (V. 75).

108. There is another phonetic difference to be noted between Irish and British. The Irish vowels are more open than the British (94), and the semi-vowels changed to a greater extent into full vowels (97, 102). This shows a somewhat greater tendency to vowel utterance in Irish than in British.

109. In the Irish language the root of the article is *n*, which is found by itself in each number before a substantive or adjective beginning with a vowel. But the following fuller forms are found in the old manuscripts.<sup>2</sup>

Singular.			
	masc.	fem.	neut.
Nominative . . .	<i>in, int</i>	<i>in, inl</i>	<i>an, a</i>
Genitive . . .	<i>in, inl</i>	<i>inna, na</i>	<i>in, ind</i>
Dative . . .	<i>(do, di)n, (do)nd</i>	<i>(do)n, (do)nd</i>	<i>(do)n, (do)nd</i>
Accusative . . .	<i>in, inn</i>	<i>in, inn</i>	<i>an, a.</i>
Plural.			
	masc.	fem. and neut.	
Nominative . . . .	<i>in, inl</i>	<i>inna, na.</i>	
		all genders.	
Genitive . . . . .		<i>innan, nan.</i>	
		<i>inna, na.</i>	
Dative . . . . .		<i>(do, di) naib, nab.</i>	
Accusative . . . . .		<i>inna, na.</i>	

<sup>1</sup> Zeuss, Preface, p. 5.

<sup>2</sup> Zeuss, p. 229.

These different forms are used according to the principles laid down in 96, 100, and as those cases only which have *nd* before a vowel (100) infect a consonant in the beginning of the following word, they must in an older state of the language have ended in a vowel while the other cases ended in a consonant. The older form of the article might have been as follows, in accordance with the cases in the older languages.

	Singular.		Plural.		
	masc.	fem.	masc.	fem.	neut.
Nominative . .	<i>inas</i>	<i>inū</i>	<i>ini</i>	<i>inās</i>	<i>ināni</i>
	<i>an</i> neut.				
Genitive . . .	<i>inī</i>	<i>inīs</i>	<i>inānīn</i>	<i>inānīn</i>	
Dative . . .	<i>inau</i>	<i>inai</i>	<i>inabyas</i>	<i>inabyas</i>	
Accusative . .	<i>inan</i>	<i>inīn</i>	<i>inās</i>	<i>ināni</i>	
	<i>an</i> neut.				

In modern Celtic only two genders of nouns are distinguished, masculine and feminine; but in old Celtic the three genders were distinguished, not only in pronouns, but also in substantives and adjectives. Afterwards the masculine and neuter were not distinguished from each other.<sup>1</sup>

The Sanskrit pronominal root *an* is not distinguished from *ēn* as neuter. In Irish *an* is the relative; *a* expressing more strongly than other vowels a demonstrative reference to. Now, in the Teutonic article may be observed an affinity between the neuter gender and the stronger demonstrative. Thus in Gothic the article is *sa* masculine, *sō* feminine, *thata* neuter; in Anglo-Saxon, *sē* masculine, *sēo* feminine, *thāt* neuter. The neuter corresponds to Sanskrit *tat*, but in English it has become the strong demonstrative or demonstrative of the remote; and it must have had, in its original use as neuter, a superior strength of demonstration to lead to this transition in its use. In fact, the masculine and feminine involve a sense of life, stronger or weaker as well as demonstration, but the former element is absent from the neuter; the neuter is more objective, and in it, consequently, the demonstrative element is stronger. And it is probably thus that we are to understand the stronger demonstrative *an* used for the neuter article in Irish. It is, however, only in the nominative and accusative singular that it is used, for in these the case relation is so light that thought dwells more on the demonstrative stem than in the other cases, so that it is thought more strongly (14).

As the nominative termination *-as* became weakened, it was probably abbreviated, and *s* brought nearer to *n*; and as *s* was dropped, *n* tended to become *nt* (96). In the accusative the final nasal was similarly brought near to *n*, and doubled it. In the genitive singular and nominative and accusative plural of the feminine, as *s* was dropped, the last syllable was strengthened in utterance so as to double *n*. In the genitive plural, as the inflection decayed, the second *n* was drawn near to the first, so as to double it; and in the nominative and accusa-

<sup>1</sup> Zeuss, p. 223.

tive plural neuter, the same happened in the decay of the inflection. In the dative singular the *b* of the inflection, after having been vocalised to the labial vowel *u*, was given up; but in the dative plural, *yas*, after having infected the *a* with its *y*, was given up, and *b* retained. In the dative the initial vowel is dropped after the final vowel of the prepositions.

110. The root of the British article is *n*, and is found attached to the end of the prepositions which end in vowels. In Armoric and Cornish there is a definite article *an* and an indefinite *un*; the *n* of both in modern Armoric becomes *l* before *l*, is preserved before vowels and before *h*, *n*, *d*, and *t*, and becomes *r* before any other consonant.<sup>1</sup>

In Welsh the article is *ir*, *r*,<sup>1</sup> in later Welsh *yr*, sometimes *y* before a consonant.<sup>2</sup> There is no change for case, number, or gender, in the British article.<sup>3</sup>

111. In the old Irish, which in variety of the forms of the noun far surpasses the Welsh of the same age, there is a double order of declension, which Zeuss distinguishes as vocalic and consonantal. To the former the declension of the adjectives belongs (149). The latter is applicable only to substantives, and not to so many of these as the former. There are also some substantives of anomalous declension.<sup>4</sup> The neuter differs from the masculine in forming the nominative, accusative, and vocative alike, and in the plural these cases alone differ from the cases of the masculine.<sup>5</sup>

The first or vocalic order is as follows, distributed by Zeuss into series, of which he gives these examples: <sup>5</sup>

		Masculine and Neuter.					Feminine.		
		Ser. I.	Ser. II.	Ser. III.		Ser. IV.	Ser. V.		
SING.	{ Nom.	<i>kēle</i>	<i>baill</i>	<i>tuisel</i>	<i>biθ</i>	<i>dilgud</i>	<i>tuare</i>	<i>rann</i>	<i>briaθar</i>
	{ Gen.	<i>kēli</i>	<i>baill</i>	<i>tuisil</i>	<i>beθo</i>	<i>dilgoθo</i>	<i>tuare</i>	<i>rainne</i>	<i>brēθre</i>
	{ Dat.	<i>kēliu</i>	<i>baull</i>	<i>tuisiul</i>	<i>biuθ</i>	<i>dilgud</i>	<i>tuari</i>	<i>rainn</i>	<i>brēθir</i>
	{ Accus.	<i>kēle</i>	<i>ball</i>	<i>tuisel</i>	<i>biθ</i>	<i>dilgud</i>	<i>tuari</i>	<i>rainn</i>	<i>brēθir</i>
	{ Voc.	<i>kēli</i>	<i>baill</i>	<i>tuisil</i>	<i>biθ</i>	<i>dilgud</i>	<i>tuare</i>	<i>rann</i>	<i>briaθar</i>
PLUR.	{ Nom.	<i>kēli</i>	<i>baill</i>	<i>tuisil</i>	<i>beθa</i>	<i>dilgoθa</i>	<i>tuari</i>	<i>ranna</i>	<i>briaθra</i>
	{ Gen.	<i>kēle</i>	<i>ball</i>	<i>tuisel</i>	<i>bibe</i>	<i>dilguθe</i>	<i>tuare</i>	<i>rann</i>	<i>briaθar</i>
	{ Dat.	<i>kēlib</i>	<i>ballib</i>	<i>tuislib</i>	<i>biθib</i>	<i>dilguθib</i>	<i>tuariθ</i>	<i>rannib</i>	<i>briaθrib</i>
	{ Accus.	<i>kēliu</i>	<i>baullu</i>	<i>tuisliu</i>	<i>biθu</i>	<i>dilguθu</i>	<i>tuari</i>	<i>ranna</i>	<i>briaθra</i>
	{ Voc.	<i>kēliu</i>	<i>baullu</i>	<i>tuisliu</i>	<i>biθu</i>	<i>dilguθu</i>	<i>tuari</i>	<i>ranna</i>	<i>briaθra</i>

The second or consonantal order, distributed in series: <sup>6</sup>

		Ser. I.		Ser. II.		Ser. III.	Ser. IV.		Ser. V.	
SING.	{	Nom.	<i>ainm</i>	<i>bēim</i>	<i>menme</i>	<i>ditiu</i>	<i>aθir</i>	<i>druid</i>	<i>jili</i>	<i>kaθir</i>
		Gen.	<i>anma</i>	<i>bēme</i>	<i>menman</i>	<i>diten</i>	<i>aθar</i>	<i>druad</i>	<i>jiled</i>	<i>kaθraχ</i>
		Dat.	<i>anmim</i>	<i>bēmim</i>	<i>menmin</i>	<i>ditiu</i>	<i>aθir</i>	<i>druid</i>	<i>jilid</i>	<i>kaθir</i>
		Accus.	<i>ainm</i>	<i>bēim</i>	<i>menmin</i>	<i>ditiu</i>	<i>aθir</i>	<i>druid</i>	<i>jilid</i>	<i>kaθriχ</i>
		Voc.	<i>anman</i>	<i>bēmen</i>	<i>menmin</i>	<i>ditiu</i>	<i>aθir</i>	<i>druid</i>	<i>jilid</i>	<i>kaθriχ</i>
PLUR.	{	Gen.	<i>anman</i>	<i>bēmen</i>	<i>menman</i>	<i>diten</i>	<i>aθre</i>	<i>druad</i>	<i>jiled</i>	<i>kaθraχ</i>
		Dat.	<i>anmanib</i>	<i>bēmniθ</i>	<i>menmanib</i>	<i>ditiuθ</i>	<i>aθrib</i>	<i>druidib</i>	<i>jilidib</i>	<i>kaθriχib</i>
		Accus.	<i>anman</i>	<i>bēmen</i>	<i>menmana</i>	<i>ditiu</i>	<i>aθru</i>	<i>druida</i>	<i>jileda</i>	<i>kaθraχa</i>
		Voc.	<i>anman</i>	<i>bēmen</i>	<i>menman</i>	<i>ditiu</i>	<i>aθir</i>	<i>druid</i>	<i>jilid</i>	<i>kaθriχ</i>

<sup>1</sup> Zeuss, p. 239.

<sup>2</sup> Ibid. p. 241.

<sup>3</sup> Ibid. p. 238.

<sup>4</sup> Ibid. p. 243.

<sup>5</sup> Ibid. p. 244.

<sup>6</sup> Ibid. pp. 264, 265.



*Aθru* fathers, is the form supposed by Zeuss for accusative plural masculine of Ser. III., and for feminine *māθra* mothers.<sup>1</sup>

Bopp perceived that the stems of Irish nouns were altered by their inflections, and that these alterations are a guide to the older forms.

The older forms of the above stems were probably *kēlya*,<sup>2</sup> *balla*, *tuisīla*, *bīθu*,<sup>3</sup> *dīlgudu*, *tuāryā*, *raunī*, *briāθari* (Zeuss gives *briāθar*),<sup>3</sup> but probably *-θar* = Sans. *-tri*, and was originally with Celtic vocalisation *-θari*), *animan*,<sup>4</sup> *benīman*,<sup>4</sup> *menman*,<sup>5</sup> *dītium*, *dītīn*,<sup>5</sup> *aθir*<sup>6</sup> (Sans. *-tri* of kindred), *druid*,<sup>6</sup> *jilid*,<sup>6</sup> *kāθriχ*.<sup>7</sup>

In the nominative singular not only *s* is dropped, but also in the first order the final vowel of the stem ; *-ya(s)* becomes *-e* by infection of *y*, and *tuisīla(s)* *tuisel* by infection of *i* (93). In *animan* and *benīman*, *-an* having been dropped, *n* was weakened and lost between the vowels (96), but compensated in *anim* by strengthening *m*, and in *benim* by lengthening *e*. In *menman* and *dītium*, final *n* was dropped as in Sanskrit (4), and the *a* of the former weakened to *e*. The fourth series, Order II., is of stems in *-id*, *-ed*, *-ad* ; they often change this termination in the nominative singular to *-iu*, *-u*, *-i*, or *-e*. So also in *kāθriχ*, final consonant is dropped, and *i* divides the concurrent consonants. The sense of the subject seems to have tended to be taken up by the stem so as to weaken the ending and sometimes to strengthen the stem with more vowel life.

The infection of the genitive singular shows the ending to have been *-i* with the *-a* stems of Series I. and II. as in Latin, Sanskrit (*s*)*y(a)* ; and *-a*, Sanskrit *-a(s)*, with all the others ; in *tuāryā(s)* (4), *y* is infected by *ā*, and in *raimnē(s)* (4), the stem vowel *a* by *ē*.

The infection of the dative singular shows *-u* (*b* vocalised) to have been the ending with the masculine neuter vocalic stems ; and in Order II., Series I., *-m* shows an assimilation of final *n* to *b*, with infection of preceding *a* by *-bi* *animimbi* (11). The ending was *-i* with all the others.

The accusative singular produces no infection of the stem different from the nominative in the masculine neuter vocalic stems ; for it only adds a nasal (4). In all the other stems the infection shows that the ending was *-im* or *-in* ; the objectivity tending to the stem and weakening the vowel (50).

The vocative singular in Order I., Series I. and II., evidences an ending *-i* (4).

In the nominative plural *bēθa*, *dīlgoθa*, *raanna*, *briāθra*, seem to correspond to Sanskrit *b'anavas agnayas* (4), in which the extension of the plural enters as *a* into the stem ; neuter nouns of Series I. make nominative accusative plural in *-e* ; *anman* *bēmen* suggest the neuter ending *-a* ; *benīman* suffered infection in its last syllable from the *i* of the second syllable supported by *e* of the first, whereas in *animan* the infecting power of *i* is overcome by *a* of the first syllable. In all the other stems the nominative plural ending is *-i* = *y(as)* (9).

In the genitive plural, the infection of all the stems except those of *bīθe* and *dīlgube* suggest *-a* corresponding to Sanskrit *-ām*, but

<sup>1</sup> Zeuss, p. 271.<sup>2</sup> Ibid. p. 726.<sup>3</sup> Ibid. p. 743.<sup>4</sup> Ibid. p. 265.<sup>5</sup> Ibid. p. 267 ; Ebel on Irish Declension, sect. 4 in Kuhn's Beitrage, i.<sup>6</sup> Ibid. p. 271.<sup>7</sup> Ibid. p. 274.

these indicate a strong *-e*, which overpowered the final *u*. Perhaps *y* of the genitive took the place of *s* or *n* in the ending *sām*, *-nām* (13), and *u* was subsequently dropped; thus *biθuyam*, *biθya*, *biθe*, *dilguduyam*, *dilgudya*, *dilgube* (143). In this series the genitive singular sometimes ended in *-e*.<sup>1</sup>

The dative plural *-ib* corresponds to *ḅyas*, *y* requiring *i* before *b*, and *yas* was dropped afterwards. The *-u* stems, like *biθ*, often make the dative plural in *-aib*,<sup>2</sup> as if from an original *-ab<sup>h</sup>yas*. There is something similar in Greek; in *ἐκύεσαι* (62), and *πῆχεται ἄστει*, *ε* corresponds to *a*.

The accusative plural indicates *u* as the ending with the masculine vocalic stems, and the masculine nouns of kindred. These have *n* in the Sanskrit (14), and the *n* is vocalised to *u* in Irish, as in Greek. In *tuari* the vowel is reduced as in the singular, but with the other stems it is *-a*, which, with the consonantal stems, corresponds to Sanskrit *-as*, or in the neuters to Greek and Latin *-a*; and with the stems *ranni briathari*, the accusative plural seems to have been *rannias briatharias*, like *πίσας πῆτιας* and then to have dropped *i*.

The vocative plural is like the accusative, the substantive being thought as object of the call.

Neuter nouns of Order I., Series I., make the nominative accusative vocative plural end in *-e* or *-i*; those of Series II. end in *-a*, and those of Series III. have the bare stem like nominative singular.<sup>3</sup> The two examples of Order II., Series I., are neuter;<sup>4</sup> stems in *-iun*<sup>5</sup> are generally feminine.

There seem to be traces of an Old Irish dual ending *-i*.<sup>6</sup>

Diminutives are formed by *-ūn*, *-ēn*, and *-θat*, masculine and neuter, by *-ēne*, *-ne*, *-nat*, *-net*, feminine.<sup>7</sup>

112. Adjectives form a comparative degree in *-iθir*, or in *-iu*, *-u*; a superlative in *-em* or *-am* (82).<sup>8</sup> There are also some anomalous comparatives in *-a* or *-o*,<sup>9</sup> which, as well as *-iu*, *-u*, may be deduced from Sanskrit *īyan*, the *n* being vocalised to *u*.

113. The declension of the noun has vanished from British, the only inflections remaining being plural endings. Of these, *-i* is not so usual as *-iou*, *-iau*, *-ion*, also *-ou*, *-eu*, *-on*. These would suggest an original *-yans* for the plural ending (9). There are also plural endings *-t*, *-d*, *-et*, *-ot*, *-ieit*, *-ed*, *-id*, *-oed*, perhaps originally singular abstracts capable of a plural sense, like Latin *juventus*. And there are collective nouns in *-wys*, singulatives in *-in* *-en*, and diminutives in *-an* *-ik* as well as some in *-os* *-aχ* *iaχ*.<sup>10</sup>

The British degrees of comparison are *-aχ* or *-oχ* comparative, *χ* perhaps from *u*, *-am* *-af* superlative.<sup>11</sup>

114. The personal pronouns in Irish are :

1		2	3	
Singular :		<i>mī</i> ; <i>tū</i> ;	<i>ē</i> masculine, <i>sī</i> feminine, <i>ed</i> neuter.	
Plural :		<i>smī</i> , <i>nī</i> ; <i>sib</i> , <i>sī</i> ;	<i>ē</i> of all genders. <sup>12</sup>	

<sup>1</sup> Zeuss, p. 254.

<sup>2</sup> Ibid. p. 256.

<sup>3</sup> Ibid. pp. 245, 249, 254.

<sup>4</sup> Ebel, sect. 4.

<sup>5</sup> Zeuss, p. 268.

<sup>6</sup> Ibid. p. 276.

<sup>7</sup> Ibid. p. 280.

<sup>8</sup> Ibid. pp. 282, 287.

<sup>9</sup> Ibid. p. 284.

<sup>10</sup> Ibid. p. 288-304.

<sup>11</sup> Ibid. p. 305.

<sup>12</sup> Ibid. p. 332-334.

The plural ending is *-i*; *n* is the root of first plural, and it seems to be associated with the demonstrative element *s*, as in Sanskrit, *a* with demonstrative *sma*; in *sib*, *s* and *b* are both radical as in Greek  $\sigma\phi$  (64), and *i* comes from the plural ending. The third person reminds of Sanskrit *ay(am)*; it has a genitive *ai*.

There is also a masculine demonstrative of both numbers, *som*, which seems akin to Sanskrit *sma*. The personal pronouns are strengthened by subjoining for first singular *sa* or *se*; for first plural *sni* or *ní*; for second singular *su*; for second plural *sí*; for third singular *se*.<sup>1</sup>

The roots of the personal pronouns are inserted in the verb after the verbal particles and the first prepositions of compound verbs to express the object, either direct or indirect. If they follow a consonant, *o* or *u*, sometimes *a* is put before first or second person, *i* before third. After the negative *na*, *i* is put before all the persons. Sometimes, to strengthen the expression of the relation, *d* is put before those vowels. The strengthening elements may in addition be suffixed to the verb, *-sa* for first singular, *-ni* for first plural, *-su* for second singular, *-sí* for second plural.<sup>2</sup>

The roots of the personal pronouns are also suffixed to prepositions which govern them, *-m* or *-um* for first singular; *-n*, *-in*, *-un*, for first plural; *-t*, *-it*, *-ut*, for second singular; *-b*, *-ib*, for second plural; *-d* or a vowel for third singular dative masculine; *-i* for third singular dative feminine; *-s* for third singular accusative masculine; *-e* for third singular accusative feminine; *-ib* for third plural dative; *-u*, *-o*, for third plural accusative; and these may be strengthened by the above-mentioned elements, or the third person by *som*, *sem*, if feminine singular, by *si*.<sup>3</sup>

1

The possessive prefixed pronouns of the singular persons are: *mo*,

$\begin{array}{c} 1 \qquad \qquad \qquad 2 \qquad \qquad \qquad 3 \\ \underbrace{\hspace{1.5cm}} \quad \underbrace{\hspace{1.5cm}} \quad \underbrace{\hspace{1.5cm}} \\ 2 \quad 3 \end{array}$

*do*, *a*; of the plural persons, *am*, *ar*; *farn* *far*, *form* *for*; *an* *a*; the first form of each pair before vowels and medials, the second before other consonants. These may be strengthened by the above elements suffixed to the noun. If the possessive be third singular masculine, *som* is suffixed, if third feminine, *si* is suffixed.<sup>4</sup> The roots of the possessives may be inserted between prepositions and substantives.

The relative pronoun in Irish is *an* or *no*; there seems to be a genitive *neíχ*. Its root *n*, *m*, is infix in verbs like those of the personal pronouns.<sup>5</sup>

The Irish demonstrative pronouns are: *ī*, *se* (*siu* locative), *so*, *sín*, *sodín*, *de*, *síde*, *ade*; they are often suffixed to a substantive which has the article; *so*, *sín*, take the article, and are not then followed by a noun; *síde*, *ade*, make a nominative plural, *sídi*, *adi*, a genitive singular, *sídi*, *adi*, a genitive plural *síde*, *ade*; *ī* has generally the article prefixed, and takes *-siu*, here (*int-ī-siu*), to express this, *tall*, there (*int-ī-thall*), to express that. There are also *ēm*, *ām*, which demonstrate emphatically, same, self; *ōn*, *sōn*, which generally demon-

<sup>1</sup> Zeuss, p. 332-334.<sup>2</sup> Ibid. p. 335-340.<sup>3</sup> Ibid. p. 340-342.<sup>4</sup> Ibid. p. 343-345.<sup>5</sup> Ibid. p. 345-350.

strate neuters ; *awl*, *sund*, *sīs*, which demonstrate place and time ; and *fe'in fe'sin* ipse, *f'ade'sin* is ipse, *f'ade'sinve* plural, *f'an'i'sin* nos ipsi.<sup>1</sup>

The interrogative pronouns are : *ke*, *ki*, *kia*, *kid*, *ko*, *koiχ* ; *ke* is used in all genders ; *k-*, prefixed to *ē*, *sē*, *ed*, distinguishes gender.<sup>2</sup>

The indefinite pronouns are : *kaχ*, *keχ* quivis, *naχ* aliquis, *keχtar* uterque, *neχtar* alter ;<sup>3</sup> *kaχ*, when used absolutely as a noun, becomes *kūχ*.

The Irish substantives *aīs*, *oīs* aetas, *līn* pars, *lukt* copia, *kēle* socius, *soχuide* multitudo, are often thought so lightly as to be equivalent to pronouns or pronominals ; *aīs*, *līn*, *lukt*, to, is qui, ii qui, *kēle* to alius, *soχuide* to nonnulli.<sup>4</sup>

115. The British personal pronouns are :

1		2	3	
Singular:	<i>mī</i> , <i>me</i> ;	<i>tī</i> , <i>tē</i> ;	<i>em ef</i> masculine neuter,	<i>hī</i> feminine.
Plural:	<i>nī</i> ;	<i>χwī</i> , <i>why</i> ;	<i>wyut</i> , <i>wy</i> , <i>i</i> ,	masculine, feminine.

They are strengthened either by being doubled or by taking *-mew*, *-teu*. Zeuss supposes that in the old language they formed genitives *mou*, *tou*, *ou*, &c., and he instances *ou*.<sup>5</sup>

The roots of the personal pronouns are inserted in the verb to express the object, direct or indirect, in British as in Irish, but only between particles ending in vowels and the verb, not between the preposition and root of a compound verb. In the British manuscripts the infixed pronouns, with the particles to which they are subjoined, are written separate from the verb, and the possessives from their substantive which follows, while in the old Irish all are joined together.<sup>6</sup>

Only some of the British prepositions take up as suffixes the personal pronouns which they govern ; and the only difference which distinguishes from each other the suffixes of the third person is that of gender. The Welsh dialect inserts between the preposition and the suffix certain letters or syllables, *-n-*, *-hon-*, *-di-*, *-nad-*, *-dan-*, &c., and corresponding elements were inserted in Cornish and Armorican. The suffixes of first person are, in singular, *-f* (= *m*), in plural, *-m* (Welsh), *-n* (Corn.), *-mp* (Arm.) ; of second singular, *-t* (Welsh, Arm.), *-s* (Corn.) ; of second plural, *-χ* ; of third singular masculine, *-au* (Welsh), *-o* (Corn.), *-af* (Arm.), *-ei*, *-i*, feminine ; of third plural, *-unt* (Welsh), *-e* (Corn.) The personal suffix also may be strengthened by subjoined elements.<sup>7</sup> The possessive pronouns are, of first singular, *my*, *vy* (Welsh), *ow* (Corn.), *ma* (Arm.) ; of first plural, *au* (Welsh), *ayun* (Corn.), *hou* (Arm.), *a*, *aya*, *ho*, being prefixed to the first plural *n* ; of second singular, *dy* (Welsh), *thy* (Corn.), *da* (Arm.) ; of second plural, *awχ*, *yχ* (Welsh), *agis* (Corn.), *hoz* (Arm.) ; of third singular, *y* (Welsh), *i* (Corn.), *e* masculine, *he* feminine (Arm.) ; of third plural, *eu* (Welsh), *aya* (Corn.), *ho* (Arm.) And these may be strengthened by the pronoun, which corresponds to the possessive, following the noun.<sup>8</sup>

<sup>1</sup> Zeuss, pp. 351-361, 372-374.

<sup>2</sup> Ibid. pp. 361, 362.

<sup>3</sup> Ibid. p. 366-369.

<sup>4</sup> Ibid. pp. 370, 371.

<sup>5</sup> Ibid. p. 374-378.

<sup>6</sup> Ibid. p. 378.

<sup>7</sup> Ibid. p. 383-388.

<sup>8</sup> Ibid. p. 388-392.

There are also in Welsh absolute possessives equivalent to the German *der meinige deinige*, &c. These are, *meu* first singular, *ten* second singular, which appear to have been originally genitives, viz., *mon tou*, *ein* first and second plural, *eid* third singular and plural; *ein* and *eid* seem to be nouns, for they take the possessives or the article before them, and after them the root of the pronoun suffixed as to a preposition; *meu*, *ten* also generally have the article.<sup>1</sup>

The roots of the possessives also are inserted between prepositions and substantives, generally written with the preposition and separate from the substantive.<sup>2</sup>

The separate relative is supplied in Welsh by a verbal particle; in Cornish and Armoric *nep* aliquis was used for a relative.<sup>3</sup> The infixed relative is supplied in Welsh by a demonstrative, thus *cum viro fuisti in domo ejus*, for *cujus*.

The British demonstratives are much less copious than the Irish. They may mostly be reduced to one root *huun* (= *hunt*), Arm. *hont*, with various vowels and additions. In Welsh the demonstrative is *huun* masculine, *honn* feminine, *hynn* neuter and plural. In Welsh the noun with the article precedes the demonstrative.

The elements *u*, *a*, *ma*, *man* are added to express this, and *akw* in Welsh to express that. There is also in Welsh a demonstrative *sef* from *isem*.<sup>4</sup>

The interrogative pronouns are for persons, *pui* (Welsh), *pu* (Corn.), *piu* (Arm.); for things, *pa*, *pi* (Welsh), *pe* (Corn. and Arm.); *pymnak* (Welsh) = *cunque*; *paup* (Welsh), *pub* (Corn.), *pep* (Arm.) = *quivis*; *nep* (Welsh and Arm.), *neb* (Corn.) = *aliquis*.<sup>5</sup>

The substantives *re* persona, *dim* res, *sawl* copia, *kilid* socius, are used like pronouns.<sup>6</sup>

The demonstrative *hun* *hunan* singular, *hunein* plural, is used, preceded by the possessive pronouns, to signify self.<sup>7</sup>

116. The primitive system of the Celtic verb is one and the same through all the dialects,<sup>8</sup> which shows the great antiquity of its peculiar structure. It has three tenses called primary, namely, present, past, and future. The person endings of the present are attached to the stem of the verb; those of the past are generally preceded by *s*, which, however, is often omitted in the active voice, and always in the passive; those of the future are preceded by *b* or *f*.<sup>8</sup> This *s* is evidently the same element as that which denotes the past in Sanskrit (27), Zend (56), Greek (70), and Latin (88): and the *b* or *f* corresponds to the element of the future in the first and second conjugations in Latin and to Sanskrit *ḅū*.

There are also three secondary tenses which have different person endings from the primary, and which express a present, past, or future, in past time, or as object or condition of another fact, or as merely ideal.

The secondary person endings by their reduced subjectivity express both affections, that of tense and that of mood, without distinguishing

<sup>1</sup> Zeuss, p. 392.<sup>2</sup> Ibid. p. 393.<sup>3</sup> Ibid. p. 397.<sup>4</sup> Ibid. p. 398-401.<sup>5</sup> Ibid. p. 402-407.<sup>6</sup> Ibid. p. 407-409.<sup>7</sup> Ibid. pp. 409, 410.<sup>8</sup> Ibid. pp. 411, 423.

one from the other. There are also verbal prefixes which help the expression of tense and mood. There is no reflexive form of the verb, as there is no reflexive pronoun. The preposition *im-*, around, expresses the reflex in British, and once or twice in Irish.<sup>1</sup>

117. The prefixed particles are in Irish *ro* and *no*, in British *ro*. Sometimes in Irish *do* is found instead of *ro*, and *mo* instead of *no*.<sup>2</sup> Both in Irish and British *ro* is used, compounded with substantives and adjectives, as an intensive prefix, and it signifies also completion.<sup>3</sup> It seems to be akin to the Sanskrit root *ruh*, to increase, come forth, be born, which has also a kindred root, *tu*, with similar meaning, and they both belong to the same circle of roots and ideas from which most of the verbal elements have sprung (27, 86, 87). The other Irish particle seems to be of a pronominal nature, for *no* is the relative pronoun in Irish (114). And there are in British two pronominal particles,<sup>4</sup> *yal* and *a*, used before the verb, of which Zeuss treats along with *ro* and *no*, though they do not correspond with either of these.

118. In Irish, *ro-*, which means completion, is used to help the expression of the past; as in Latin the perfect is used as an aorist, both languages tending to think the verb in its accomplishment. But *ro-* is sometimes omitted after particles which weaken the sense of verbal realisation, as the negative *n̄*, and the preposition *ō*, from, used as a conjunction,<sup>5</sup> and governing the verb as an object, so as to weaken its subjectivity. In this use *ro-* admits between itself and the verbal stem the infixed pronominal elements (114).<sup>6</sup> Its vowel not only changes to *a*, *u*, *ui*, *i*, either of itself or by infection or assimilation, but is more frequently absorbed, as when the particle is followed by a verbal stem beginning with a vowel, or is preceded by another particle ending with a vowel, which takes up the *r* as a final consonant.<sup>6</sup>

In Irish verbs, compounded with a single preposition, *ro* as the particle of the past intervenes between the preposition and the root; in verbs compounded with more than one preposition, it generally comes between the first preposition and the second, but sometimes follows the second. If the compound verb be affected with the interrogative prefix *in* or the negative *n̄*, *ro-*, when it is used, follows these particles. In verbs compounded with one or more prepositions, the infixed pronominal elements are inserted before *ro*.<sup>7</sup>

But *ro* is used in Irish, not only in this sense of completion, but also prefixed to the third singular future of the verb substantive of the form *bia*, and after *kon* (*ut*) before a verb used in a subjunctive sense.<sup>8</sup> In these uses it evidently expresses a sense of growth towards accomplishment, so as to strengthen the future or the aim and object of another verb.<sup>9</sup>

The particle *no* (sometimes *nu*) makes in Irish a present or future, which has the secondary person endings, to be relative to another verb as the object or condition of the latter, or relative to a past, so as to express an imperfect or a past future. It is used only with verbs which are not compounded nor preceded by another particle; for it is

<sup>1</sup> Zeuss, pp. 412, 896.<sup>2</sup> Ibid. p. 419.<sup>3</sup> Ibid. pp. 420, 833, 867.<sup>4</sup> Ibid. p. 422.<sup>5</sup> Ibid. p. 413.<sup>6</sup> Ibid. p. 414.<sup>7</sup> Ibid. p. 415.<sup>8</sup> Ibid. p. 416.<sup>9</sup> Ibid. p. 418.

only the former that have sufficient unity to be taken into the correlation with another verb, and even they, if already affected with a relation, are not apt to be thought with sufficient unity to take this new relation, and if affected with *no*, are for the same reason not apt to take any other relation except the simple and most usual one, *kon* (*ut*).<sup>1</sup>

The infixed pronominal elements are taken in Irish after *no* as after *ro*, and sometimes *no* supplies the want of a preposition which would express the relation of the verb to the infixed pronoun, representing pronominally the verb as relative to the pronoun. In this latter use *no* may be preceded by a conjunction.<sup>2</sup>

119. In the older British also *ro* (*ry*, *re*, *ra*) is used as in Irish, but in the later British it passed out of use.<sup>3</sup>

In the oldest Welsh *ro* occurs as the sign of the perfect. Afterwards *ry* denotes in Welsh not only the perfect and pluperfect, but also the future perfect and the perfect infinitive, being expressive of completion.<sup>3</sup> It always adheres to the verb itself, and does not suffer a pronominal element to come between them.<sup>4</sup> This particle, however, disappeared early, and then the only particles used with the verb were *yd* (*y*, *ed*, *e*) and *a*, which, being used with all the tenses, have nothing corresponding to them in Irish.<sup>4</sup>

*Yd*, or (if followed by a consonant) *y*, precedes the verb when the verb begins the sentence, or when at least the verb precedes the subject, though certain adverbs and conjunctions may go before it; *a* precedes the verb if it follows subject or object.<sup>4</sup> *Yd* is a demonstrative element pointing to the verb, and strengthening its assertion when it is in its natural place, according to Celtic syntax; *a* points to the verb as in relation with what has gone before when it is not in its natural place as thought absolutely, but follows another member with which it is thought as in relation; *yd* and *a* are both affirmative. *Ny* is the negative particle of the absolute sentence, *na* of the dependent sentence.<sup>5</sup> Both *yd* and *a* admit after them the infixed pronominal elements, and these also may follow the primitive conjunctions, though *yd* and *a* cannot;<sup>6</sup> *yd* and *a* are not used before the verb substantive when it is preceded by the predicate.<sup>7</sup> These two particles are similarly used in Cornish and Armoric.<sup>8</sup> They can scarcely be regarded as forming part of the structure of the verb, like *ro* and *no*.

The verbal particle *re* is found in Old Cornish with the sense of the perfect; but it differs from the Welsh particle in admitting the infixed pronominal elements between itself and the verb.<sup>9</sup>

The particle *ra* in Old Armoric also admits after it the infixed pronouns; but it expresses not the perfect but rather the optative or future.<sup>10</sup>

120. The personal inflection of the old Irish verb is given by Zeuss as follows, with the roots, *kar* love, *gni* do, *ber* bear, *suidiy*

<sup>1</sup> Zeuss, p. 417.

<sup>4</sup> Ibid. p. 421.

<sup>7</sup> Ibid. p. 425.

<sup>2</sup> Ibid. pp. 418, 419.

<sup>6</sup> Ibid. p. 422.

<sup>8</sup> Ibid. pp. 426, 427.

<sup>10</sup> Ibid. p. 426.

<sup>3</sup> Ibid. p. 420.

<sup>6</sup> Ibid. p. 424.

<sup>9</sup> Ibid. p. 425.

put, each of which is a specimen of a series of verbs, the last with a deponent formation. The first series is the most numerous.<sup>1</sup>

*Present.*

		Ser. I.	Ser. II.	Ser. III.	Ser. IV.
Sing.	1st person . .	<i>kairim</i>	<i>gniū</i>	<i>biur</i>	<i>suidigur</i>
	2d „ . .	<i>kairi, -e</i>	<i>gni</i>	<i>bir</i>	( <i>suidigir</i> )
	3d „ . .	<i>kairid</i> <i>kairi kara</i>	<i>gniūd</i> <i>gnī</i>	<i>berid</i> <i>beir</i>	<i>suidigeθar</i>
Plural.	1st „ . .	<i>karam</i>	<i>gniam</i>	<i>beram</i>	<i>suidigemmar</i>
	2d „ . .	<i>kairid</i>	<i>gniūθ</i>	<i>berīθ</i>	<i>suidigid</i>
	3d „ . .	<i>kairēt</i>	<i>gniāt</i>	<i>berat</i>	<i>suidigetar</i>

*'Past.*

		Ser. I.	Ser. II.	Ser. III.	Ser. IV.
Sing.	1st person	<i>roχarus</i>	<i>rognius</i>	<i>ruburt</i>	<i>rosuidigsinr</i>
	2d „ .	<i>roχaris</i>	<i>rognis</i>	<i>rubirt</i>	<i>rosuidigsir</i>
	3d „ .	<i>roχar</i>	<i>rogni</i>	<i>robart</i>	<i>rosuidigestar</i>
Plural.	1st „ .	<i>roχarsām</i>	<i>rogensam</i>	<i>robartmar</i>	<i>rosuidigsemmar</i>
	2d „ .	<i>roχarsid</i>	<i>rogensid</i>	<i>robartid</i>	<i>rosuidigsid</i>
	3d „ .	<i>roχarsat</i>	<i>rogensat</i>	<i>robartatar</i>	<i>rosuidigsetar</i>

*Future.*

		Ser. I.	Ser. II.	Ser. III.	Ser. IV.
Sing.	1st per.	<i>karub</i>	( <i>gniub</i> )	( <i>berub</i> )	<i>suidigfur</i>
	2d „	<i>kairfe</i>	( <i>genfe</i> ) <i>gene</i>	( <i>berfe</i> ) <i>bere</i>	( <i>suidigfir</i> )
	3d „	<i>kairfel</i> <i>kairfea</i>	( <i>genfa</i> ) <i>gena</i>	( <i>berfa</i> ) <i>bera</i>	( <i>suidigfeθar</i> )
Plural.	1st „	<i>karfam</i>	( <i>genfam</i> ) <i>genam</i>	( <i>berfem</i> ) <i>beram</i>	<i>suidigfemmar</i>
	2d „	<i>kairfid</i>	( <i>genfid</i> ) <i>genid</i>	( <i>berfid</i> ) <i>berid</i>	<i>suidigfid</i>
	3d „	<i>karfat</i>	( <i>genfet</i> ) <i>genat</i>	( <i>berfet</i> ) <i>berat</i>	( <i>suidigfetar</i> )

The forms in parenthesis have not been found by Zeuss, but conjectured by him from analogy.<sup>2</sup>

The forms of the third singular without *d* are used when the verb, instead of being absolute and positive, taking the lead in the sentence, is construct or negative. In other persons too the vowel *i* subjoined to the root belongs properly to the absolute use of the verb, *e* or *a* to the dependent or negative use of it.<sup>3</sup>

After the person endings very frequently are added, both in the active and in the passive, the strengthening elements of pronouns, which are infixed; and often also in the active that of the person itself without regard to the infixed pronoun, if there be one.<sup>3</sup>

The first series differs from the others in having in the singular of the present a conjugational vowel subjoined to the root. This vowel is inflected by the vowel of the person ending, and according as the latter is taken up by the former it is weakened and becomes superfluous in its original place. Thus the singular person endings *mi*, *si*, *ti* became *m*,

<sup>1</sup> Zeuss, p. 430.

<sup>2</sup> Ibid. p. 429.

<sup>3</sup> Ibid. p. 428.



*s*, *t*, and afterwards *s* was dropped (97), and *t* was weakened to *d* (99). In the stems which have no conjugational vowel there was not so great an absorption of the vowel of the person ending, though still it infected the preceding syllable. It retained power in the first person to vocalise the *m*, so that the person ending became *u*, and was afterwards taken up by infection into the preceding syllable. But in the second and third persons the vowel of the person ending was taken up into the preceding syllable, and the persons suffered the same changes as in the first series. In the third person, however, the *i* of the person ending, instead of passing into the root, was inserted between the root and the person, as if it so entered into the consonant of the person to give life to that element being naturally objective, that this required *i* before it to give it the proper utterance (93), and then the other *i* was dropped. In the fourth series *ar* is subjoined to the person, becoming *ur* in the first person, and *ir* in the second. It is doubtless the same element as that which terminates the Latin deponent and passive verb.

The person endings of the plural, which probably were originally *mas*, *tis*, *anti*, became by infecting the preceding syllable and consequently losing their own vowels, *am*, *id*, *at*; but some verbs of the first series were subjective enough to animate their first plural with *i*, and take *mi* instead of *am*.<sup>1</sup>

The third plural is formed in *-it* also, and in *-et*.<sup>1</sup>

The past, which is in truth a perfect, being formed with *ro-*, has the same elements of person as the present, except that there is no element of the third singular in the first three series. Moreover, the third series, which ends in a consonant, has so little subjective movement that its stem corresponds to the Sanskrit past passive participle in *-ta* (35), and in the plural the persons also have a passive formation, being thought with less activity than in the singular, because with reduced individuality. In the fourth series, the *s* of the tense seems to be attracted by the *t* of the third singular, but the third plural being originally *nt*, could not thus take up the *s*. In *rochar-*, *k* is aspirated between vowels (99).

The second and third persons singular of the future vary from those of the present by being more open, as with an infusion of *a*, which probably has a significance of probability like that of *ā* in the Zend future (52).

121. The secondary person endings in Irish have less expression of subjective engagement with the verb, and are therefore suitable for the past, and for the moods of less subjective realisation. These are, in the singular: *-in*, *-θa*, *-ad*; in the plural, *-mis*, *-θe*, *-tis*.<sup>2</sup> The first singular has *n* instead of *m*, which is probably a weaker expression of self, and corresponds to *ν* in Greek. The second and third singular and plural have a strong analogy to the person endings of the reduplicated perfect in Sanskrit (24), the *a* of second and third singular probably expressing what is removed from present realisation either as past, or as dependent on another fact, or on a supposition.

This is less distinctly thought in the second plural, because the

<sup>1</sup> Zeuss, p. 433.

<sup>2</sup> Ibid. p. 450.

thought of the plural is less distinct than that of the singular. The first plural, as well as the third, has the more objective plural element *s* (21, 24) on account of the reduced subjective realisation.

These person endings form what are called the secondary tenses, present, past, and future. With *no-* prefixed to the verb, they form a secondary present, which expresses an imperfect, and also a subjunctive and hypothetical;<sup>1</sup> with *ro-* prefixed, but without the *s* of the past, they form a secondary past, which expresses a perfect subjunctive or hypothetical;<sup>2</sup> with the element of the future they form a secondary future, which expresses either a past future, or a future subjunctive or hypothetical.<sup>3</sup>

A future perfect is expressed in Irish by prefixing *ro-* to the simple future indicative.<sup>3</sup>

Besides the subjunctive use of the secondary tenses, there is also in Irish a subjunctive or hypothetical present formed with the following person endings: singular *-am*, *-a*, *-a*, plural *-am*, *-ad*, *-at*;<sup>4</sup> the *a* seems to have a significance similar to *ā* of the Sanskrit potential (18), and of the Zend subjunctive (52). And also in the present and future, the verb of a relative clause, or after a relative particle, may form the third singular in *-as* or *-es*, the third plural in *-ate*, *-ite*, *-te*, the *s* of the former, and the *e* of the latter, referring pronominally to the subject or the object.<sup>5</sup>

The persons of the imperative are: second singular in *-e* external, or *-i-* internal before final consonants; third singular *-ad*, *-ed*; first plural *-am*, *-em*; second plural *-id*; third plural *-at*, *-et*. The first and third persons are subjunctive, except that the third singular has *d*.<sup>6</sup>

The Celtic infinitive is quite a substantive, being declined as such. It is in Irish either the stem of the verb, or a verbal substantive formed with the terminations *-ad*, *-ed*, *-id*, *-ud*, or less frequently *-t*, *-āl*, *-am*, *-em*, *-um*, *-ent*, *-end*, *-siu*, *-tiu*, *-ixe*, *-ext*.<sup>7</sup>

In the Celtic passive, owing to the prevalence of the impersonal construction, there are only some scattered remains of any person except the third singular, and still less in Welsh than in Old Irish.<sup>8</sup>

In the latter the inflection is similar to the fourth or deponent series of the active. In the past tense it is the participle that is most frequently used, but sometimes the third singular present with *ro-* prefixed.<sup>9</sup>

The third singular of the secondary tenses passive in Irish ends in *-the*, *-de*, that of the primary tenses being *-thar*, *-ther*. The sense is either past or subjunctive or hypothetical, and the prefixes *no-* and *ro-* are used as in the active.<sup>10</sup>

There is also in Irish a subjunctive third singular passive in *-athar*, *-ar*, with which also the imperative is expressed. And there is a passive infinitive *-athar*, *-thar*, formed apparently from the active *-ad* by subjoining the passive termination.<sup>11</sup>

There are two passive participles in Irish, a past participle in *-ithe*,

<sup>1</sup> Zeuss, p. 450.

<sup>2</sup> Ibid. p. 453.

<sup>3</sup> Ibid. p. 454.

<sup>4</sup> Ibid. p. 455.

<sup>5</sup> Ibid. pp. 456, 457.

<sup>6</sup> Ibid. p. 457.

<sup>7</sup> Ibid. p. 459.

<sup>8</sup> Ibid. p. 463.

<sup>9</sup> Ibid. p. 464-469.

<sup>10</sup> Ibid. p. 470.

<sup>11</sup> Ibid. p. 472.

-*θe*, -*θa*, -*θa*, -*θe*, -*θa*, corresponding to Sanskrit -*tu* (35); and a future in -*iθi*, -*θi*, -*θi*, like Sanskrit -*tarya*<sup>1</sup> (37).

122. In the old remains of both branches of the Celtic language, there are the beginnings of an impersonal inflection of the verb which prevailed more and more in the later dialects. This inflection, when fully developed, admits only the third singular of each tense, signifying the other persons by adding to this the pronouns of these persons. This is done in the old language by infixed pronominal elements, and only in the passive, except that in old Irish it appears also in certain forms of the verb substantive. And in consequence of this construction the personal inflection of the passive is in Old Irish almost confined to the third singular and plural, in Old Welsh to the third singular. The later Celtic adding the absolute forms of the pronouns to the third person, not only in the passive, but also in the active, forgets more or less all personal inflection.<sup>2</sup>

123. The verb substantive in Irish is expressed by four different roots. Of these, *a*, *tā*, *fil*, are used only in the present, *bi* in all the tenses. They are irregular in their inflection, as well as the verbs *fit* know, *klo* hear, *eit* go, *ik* reach, and *ol* says, which occurs in no other form. Some verbs also are reduplicated.<sup>3</sup>

124. The old Welsh verb was thus inflected, the future being supposed by Zeuss, not found.

		Present.	Past.	Future.
Singular, 1.	. .	<i>karam</i>	<i>keveis</i>	( <i>karboim</i> )
" 2.	. .	<i>keri</i>	<i>keveist</i>	( <i>karboi</i> )
" 3.	. .	<i>keir, kar</i>	<i>karas</i>	( <i>karib, karab</i> )
Plural, 1.	. .	<i>karun</i>	<i>karasam</i>	( <i>karbom</i> )
" 2.	. .	<i>karauχ</i>	<i>karasauχ</i>	( <i>karbo</i> )
" 3.	. .	<i>karant</i>	<i>karasant</i>	( <i>karboint, karbont</i> ) <sup>4</sup>

The secondary person endings were singular, -*un*, -*ut*, -*ei*, plural -*em*, -*euχ*, -*int*. Zeuss thinks that -*am* first singular present indicates a mixture of the present with the future, as *a* has a future significance.<sup>4</sup> The element of the first plural is *n*, *n* being probably only a connective vowel. In -*am*, -*auχ*, and -*ant*, *a* is perhaps significant of the extension of plurality. The element of the second singular was probably stronger than that of the third, and held its *i* outside the root. In the past the *i* of the person was taken up before the *s* of tense in the first and second singular.

The secondary persons were more objective and their radical elements somewhat stronger; the vowels before them were probably merely connective. The *n* of first singular corresponds to the Irish.

The other British dialects varied slightly from the above, but corresponded in the main.

125. There are some traces in British of the subjunctive present formed with *a*.<sup>5</sup>

In the imperative second singular the Welsh language uses the stem of the verb if simple, but adds to it *a*, *e*, or *i*, if it be denomina-

<sup>1</sup> Zeuss, p. 473.<sup>2</sup> Ibid. pp. 412, 413.<sup>3</sup> Ibid. p. 476-495.<sup>4</sup> Ibid. p. 497.<sup>5</sup> Ibid. p. 515.

tive or derivative. Sometimes a strengthening pronoun follows. The imperative third singular is *-et*, first plural *-en*, second plural *-uχ*, third plural *-ent*.<sup>1</sup>

The infinitive has many forms, and is a noun as in Irish.<sup>2</sup>

126. There is no trace of personal inflection in the passive, the third person with infixed pronouns being used instead. This in

Welsh is *kerir*, *karat*, *kaver*.

The third person of the secondary tenses passive in Welsh is *kerit*,  
pres. past fut.  
*karisit*, *karaur*.<sup>3</sup>

The Old Welsh passive participles are past *-etik*, future *-atoi*, *-ittoi*. The former adds to the termination *-et* a derivative element *-ik*.<sup>4</sup>

In Cornish and Armoric there spread along with the impersonal inflection a use of composite tenses consisting of the past participle and the various tenses of the verb substantive to express the tenses, primary and secondary, of the passive verb, whose simple forms were preserved only in Welsh.<sup>5</sup> And this passed to the active, past passive participles being used in a neuter sense with the verb substantive to express the past.<sup>6</sup> Armoric formed a past active with the verb to have and the past participle.<sup>7</sup> And the modern British uses composite tenses consisting of the infinitive with the auxiliary verb to do.<sup>7</sup>

The irregular verbs in British are akin to those in Irish. In some of them the verb substantive coalesces with the root.<sup>8</sup>

127. There is a full supply in Celtic of conjunctions and prepositions used properly as transitional elements of relation, connecting and governing, the former the verbs, and the latter the nouns in cases distinguished in the ancient language according to the nature of the relation.<sup>9</sup>

128. The Celtic uses a multitude of derivative elements like the other Indo-European languages;<sup>10</sup> it shows a tendency to composition like the Greek (78), and far more than the Latin.<sup>11</sup>

The ancient Gallic, in forming compounds, generally used *o* as a connective element between the two components, sometimes even after *i* or *u* when this was the final vowel of a nominal stem standing as the first component (78). The use, however, of these vowels of composition declined in the ancient language; and in the oldest Irish and British, the only traces of them which remain are their inflections of the initial consonant of the component which followed them.<sup>12</sup>

In the true compounds the defining or limiting component goes first; and where the contrary order is followed, it is rather a construction that has coalesced from frequent use than a true compound.<sup>13</sup>

129. In Irish the verb takes the lead in the sentence preceded only by the negative or interrogative or conjunctive particles. The verb

<sup>1</sup> Zeuss, p. 515-517.

<sup>2</sup> Ibid. p. 518.

<sup>3</sup> Ibid. p. 523.

<sup>4</sup> Ibid. p. 528.

<sup>5</sup> Ibid. p. 530.

<sup>6</sup> Ibid. p. 531.

<sup>7</sup> Ibid. p. 532.

<sup>8</sup> Ibid. p. 533-560.

<sup>9</sup> Ibid. pp. 576, 663.

<sup>10</sup> Ibid. p. 723.

<sup>11</sup> Ibid. p. 818.

<sup>12</sup> Ibid. p. 819.

<sup>13</sup> Ibid. p. 859.

<sup>14</sup> Ibid. p. 881-883.

substantive takes the lead when it is expressed, and is followed by the predicate. The predicate goes first when there is no verb substantive.

If any member of the sentence gets the lead owing to a special emphasis it is preceded by the verb substantive; and the rest of the sentence either qualifies it or is itself also preceded by the verb substantive as a second assertion.<sup>1</sup> Sometimes the emphasised word precedes without the verb substantive as a nominative absolute.<sup>2</sup> The subject generally follows the verb, and then the objects and conditions, but sometimes the object goes before the subject.<sup>3</sup>

The genitive in Irish follows its governor; and the former may have the article before it, but not the latter. The article sometimes precedes even a proper noun.<sup>3</sup> If an adjective agrees with a substantive which is preceded by a possessive pronoun, it takes the article before it to represent the substantive.<sup>4</sup>

In Irish the genitive is sometimes expressed with the preposition *di*; and the preposition *do*, meaning *to*, generally precedes the dative.<sup>5</sup>

The adjective generally follows its substantive in Irish; and when it precedes, it is to be regarded as compounded with the substantive, which is more usual in Celtic than in the kindred languages. When thus constructed the adjective has no inflection; and the closeness of the combination appears from the infection of the initial consonant of the substantive.<sup>6</sup>

The pronominal adjectives, and the numerals, both cardinal and ordinal, precede their substantive.<sup>6</sup>

If a personal pronoun as subject of the verb is at the end of the sentence in Irish, it takes the preposition *do*, showing a weakness in the sense of subject. The same takes place with a possessive when it follows the substantive.<sup>7</sup>

130. In Welsh the verb or predicate takes the lead in the sentence, preceded by the affirmative, negative, interrogative, or conjunctive particles. The predicate is followed by the verb substantive if this is expressed, or by the verbs *nominari*, *eligi*, &c., the latter taking before them the particle *y* (119), which is not taken by the verb substantive. Only after negative and interrogative, and some other particles, and after adverbs, the verb substantive precedes the predicate.<sup>8</sup>

Very often, however, the subject or the object takes the lead, but then the verb is constructed with the relative particle *a* before it (119), showing that the preceding noun is in an absolute position. This particle, however, is often omitted if the verb be the verb substantive or one of its compounds.<sup>9</sup>

A relative clause is often preceded in Welsh, not by the relative particle *a*, but by the affirmative *yaf*, *y*; when the relative is weak the clause being almost a separate sentence, or when the relative is neither subject or object but in an oblique case.<sup>10</sup>

<sup>1</sup> Zeuss, p. 884.

<sup>4</sup> Ibid. p. 888.

<sup>7</sup> Ibid. p. 892.

<sup>2</sup> Ibid. p. 886.

<sup>5</sup> Ibid. p. 889.

<sup>8</sup> Ibid. pp. 898, 899.

<sup>10</sup> Ibid. pp. 901, 902.

<sup>3</sup> Ibid. p. 887.

<sup>6</sup> Ibid. p. 890.

<sup>9</sup> Ibid. pp. 899, 900.

The order of the remaining members of the sentence is not strict in Welsh any more than in Irish, but the subject usually precedes the object.<sup>1</sup>

Definitions of time, place, or other circumstance, sometimes take the first or the second place.<sup>1</sup>

In Welsh, as in Irish, the article is not used before a substantive which is defined by another in the genitive. The article is generally not used before a proper noun, but it may be used before a proper noun in an oblique case, or with a proper noun in the nominative after *heb* inquit, serving probably to facilitate the correlation of the proper noun. For a similar reason the article is used before an adjective whose substantive is separated from it or connected with a possessive pronoun; the article facilitates the connection of the adjective with the substantive by directing attention to the latter as connected with the former.<sup>2</sup>

As in Old Irish, so in Welsh, the genitive follows its governor, and is sometimes expressed with *di*, meaning of, from, and the dative always requires *di*, meaning to.<sup>3</sup>

The adjective follows its substantive, as in Irish, but may precede it without inflection as compounded with it.<sup>4</sup>

There are adjectives in Welsh which do not take the plural inflection after plural substantives, as *mawr* great, *tef* handsome; also compounds, but especially derivatives in *-ik*, *-awk*, *-awl*, *-eid*, and the degrees of comparison.<sup>5</sup>

The infinitive is thought as a substantive in British as in Irish.<sup>6</sup>

If a passive infinitive depends on another verb, this becomes passive also.<sup>7</sup>

A reflexive or reciprocal action is expressed in British by prefixing *om*, *im*, around, to express the turning in on itself of the reflex or mutual.<sup>8</sup>

The tenses are not kept distinct in British. The future is confounded with the present, and the secondary present with the secondary past in their hypothetical use.<sup>8</sup>

131. The following are examples of Old Irish of the eighth or the beginning of the ninth century,<sup>9</sup> as analysed and explained by Zeuss:<sup>10</sup>

not be different what out bear 3d sing. pass. from mouth and what is rel.  
(1.) *Ní · p sain an · as · ber · thar ho · giun okus am · be · ss*  
in heart

*hikridiu*, let not what is uttered from the mouth and what is in the heart be different; *p* is an abbreviated form of *ba*, the third singular subjunctive or imperative of *bi* (121); *an* is the relative pronoun; *giun* dative singular of *gen*, and *kridiu* dative singular of *kride*; *bess*, the relative third singular present of *bi*; the *ss* is a demonstrative element referring as a relative to the subject and representing it with the

verb (121). (2.) *Buail fuairreaz kaz fri · alaile o · n ·*  
be 3d sing. imper. kind every one towards other from art.

<sup>1</sup> Zeuss, p. 903.

<sup>4</sup> Ibid. p. 906.

<sup>7</sup> Ibid. p. 528.

<sup>2</sup> Ibid. p. 904.

<sup>5</sup> Ibid. p. 907.

<sup>8</sup> Ibid. p. 909.

<sup>10</sup> Ibid. p. 986-996.

<sup>3</sup> Ibid. p. 905.

<sup>6</sup> Ibid. p. 910.

<sup>9</sup> Ibid. Preface, p. 34.

love brother ly  
*deserk brathardi*, let every one be kind towards another from brotherly love; Zeuss thinks *fuairreχ* a compound of *fo* under, and *aiθreχ*, akin to *aiθirge* pœnitentia; *brathardi* dative feminine singular of the adjective *bratharde*. (3.) *Nī dene komrud fris in ulk ar* neg. do 2d sing. imper. vengeance towards the evil that not be 3d sing. subj. evil two dat. part dat. pl. to do thou good towards him *na baul hulk dib tinaib do'gnē'su maiθ fris som* and be 3d sing. fut. good he afterwards  
*okus bid maid som iarun*, do not take vengeance on the evil that there be not evil on both sides; do thou good towards him, and he will be good afterwards; *dene* is the second singular imperative (121) of *denim*, I do; *ar* is the preposition to, at, used as a conjunction; *tinaib* is dative plural of *tin* part, genitive *leno*, like *biθ*, on the dative plural in *-aib* (see 111); *do'gnē'su* is the second singular imperative of the compound verb *do'gniu*, I do to, with the strengthening suffix *su* of second singular (114); *bid* is third singular future of *bi*, becoming weakness and intencs. fear on the servant while for *bied*. (4.) *Komadas lobre okus imm'omon fors'in mug kein* that is rel. 3d sing. in service to his master dat. *m'bi s ok'fognam di'a χoimdid*, weakness and fear are becoming to the servant while he is in service to his master; *lobre* is substantive from *lobor*, weak; *omon* is substantive from the root *om*; *imm*, sometimes *imb* (Latin *amb*), means about, and also expresses the reflex or mutual; it here strengthens *omon*; *kein* is originally a noun, and therefore requires with the verb the relative particle *no*, reduced to *n*, or to *m* before *b*; *s* relative third singular (121); *fognam* is verbal noun (121) of *fogniu* I serve, which is compounded of *fo* under, and *gniu* I do; *koimdid* is dative singular of *koimdiu* (111, Ord. II., Ser. IV.), *k* being aspirated between the vowels. (5.) *Nī dilga' 2d pl. art. neut. unkindness to do 3d sing. pass. towards you but back speak 2d pl. id an ankride do'gnī θer fr ib akt at gairiθ* at scold 2d pl. at every one and to from take 2d pl. every one neg. rel. to from *ar keliθ ar χāχ okus di'oi prid kāχ na ti u* take 3d sing. imper. every one his fellow *brad kāχ a χēle*, ye do not pardon the unkindness that is offered to you, but you retort and inveigh at every one, and you defraud every one; let not every one defraud his fellow; the *a* of *dilgaid* seems to be due to the negative (120); *dilg-* seems to be a compound of *di* from, and *lug* let go or loose; *ankride* is compounded of *an* privative and *kride* the heart; *do'gnīθer* from *do'gniu* I do to; *atgairiθ arkelīθ* are of Series III. (120); *dioiprid* is compounded of *di* to, *od* from, and *ber* to bear, bear from (another) to (yourself), the *d* of *od*, though dropped, hardens *b* to *p*,<sup>1</sup> as that of *nad* hardens *d* of next word to *t*; *na* or *nad* is the negative particle of a dependent or relative sentence, it seems to incorporate with the negative the demonstrative element *ad*, referring to that on which it depends or to which it is relative. (6.) *Reθ it huili okus is'oin fer* run 3d pl. all and is one man get 3d sing. rel. victory of 3d pl. dat. in his completing prize seek pass. 3d per. subj. *gaib es buaid di ib inn'a χomal'nad lann seg ar*

<sup>1</sup> Zeuss, p. 856.

there is fem. that reward art. gen. contest gen.  
*and is 'si' ede dulχinne in · mlti*, all run and there is one man who gets the victory of them in his finishing, the prize that is sought there, that is the reward of the contest; *reθit* is third plural present of the verb *red* run; *is* third singular verb substantive; *komalnad* is the verbal noun or infinitive; the -*ar* of *segar* is a form of the third person passive, analogous to -*a* in the active (121), and used in a relative clause; *dulχinne* is feminine

derivative -*inne*; *mlti* genitive of *m̃lte* neuter. (7.) *Is · bees do ·*  
 art. dat. pl. good teacher dat. pl. praise art. knowledge gen. art. gen. pl.  
*naib day · forkittlil · ib mol · ad in · gni innan ·*

hear er gen. pl. so that love 3d pl. sub. what past hear 3d pl. pret.  
*θts'id · e ar · a · kar · at an · ro · χluin · etar*, praise of the knowledge of the pupils is a custom with good teachers that they may like what they have heard; *forkittlil* and *θtside* seem to be of the same original formation in -*idu*, and to be declined like *dilgud* (111), *forkittlil* is derived from *forkital* instruction, which is derived from *forχanim* I teach, which is compounded of *for*, on over, and *kan*, which seems to mean speak; Zeuss (p. 440) translates *forχun* dico praeipio; *molad* is verbal noun or so-called infinitive; *gni* is genitive of *gne*; *ara* is conjunction, compounded of *ar* to, in order to,

interrog. not known to you be 3d pl. many kinds  
 and a demonstrative. (8.) *Ki · ñ gl̃ l · ib ata · at il · χeñle*  
 speech gen. sing. this world dem.

*berli i · sin · biuθ · so*, is it not known to you there are many kinds of speech in this world? *ki* is the interrogative pronoun what, used as an interrogative particle; -*ib* the suffix of second plural; *ataat* third plural present indicative of *ata* to be; *χeñle* plural of neuter noun of Order I., Series I.; *berli* genitive singular of *berle*; *biuθ* is known to me be 3d sing. fut.

dative singular of *biθ* (111). (9.) *Is · gl̃ li · m · sa rom · bia*  
 victory  
*buaid*, 'tis known to me I shall have the victory; -*sa* strengthens the first singular (114); *ro* strengthens the future *bia* with a sense of completion, and it is probably on account of the completion that it is *bia* instead of *bied*, for *robia* occurs also in indicative

sentences; -*m*- is infixed first person. (10.) *Meit do · n ·*  
 in 3d sing. pas. subj. on us tribulation is dem. fem. quantity art. dem.  
*ind · nag · ar for · ñni foxiθ is · si meit in · sin*  
 to rel. in 3d sing. pass. subj. art. comfort verbal noun not give 3d sing. God  
*do · n · ind · nag · ar in · diθn · ad, ni tabir dia*  
 on us therefore tribulation not dem. under with bear past 1st pl. rel. be  
*for · ñni dim foxiθ n · ad · fo · χom · ol · s · am, k · i ·*  
 3d sing. art. fem. tribulation bear 1st pl. pres. to bear 3d sing. comfort in  
*d ind foxiθ folloñ · am do · ber diθn · ad dar ·*  
 its place by bear art. gen. pl. gen. pl. be 3d sing. fut. art. fem. salvation past  
*a · hessi, tre · fulañ inna · fochide bied ind · hik ro ·*  
 know 1st pl. be 3d sing. rel. firm your faith this dat. pl. tribulation dat. pl.  
*fit · emmar be · s so · ñirt for · viressi is · aib foxid · ib,*  
 as much as tribulation is ordained for us, so much it is that comfort is ordained; God gives not to us therefore tribulation that we might not bear; though there be tribulation that we bear he brings comfort



in its place ; by bearing of tribulations shall be salvation ; we know that your faith is firm in these tribulations ; *domindnagar* is from the doubly compounded verbal stem *dorindnag*, from a root *nag*, with some fine simple meaning like put or give ; *n* is an infixed relative referring to *meit* ; *formni* is *forn* strengthened with *ni* the strengthening element of the first plural ; *nadfoxmulsam* is for *nadfoxmofsam*, the root being *fol* bear, of which *folloñ* or *fulañ* is a lengthened form ; *dober* is a compound of *do* and *ber* ; *so* is an intensive prefix, Sanskrit

is custom arrogance gen. sing. fem. is different art. neut.  
*su*, Greek εἶ. (11.) *Is* · *bes* *uailbe* *is* · *sain* *an* ·  
 dem. out bear 3d sing. subj. pass. in 3d sing. fem. and to do 3d sing. ind. pass.  
*ī* *as* · *ber* · *ar* *in* · *dī* *okus do'gni* · *θer*,

the custom of arrogance is, that is different which is said in it and is acted ; *uailbe* is genitive singular of *uailb*, Order I., Series V., *dogmitber* is done to.

if be 3d sing. second. pres. ill will and revenge in every one of  
 (12.) *Ma* · *beith* *mī* · *duθraχt okus dīgal la kāχ uā* ·  
 2d pl. to other dat. sing. on thought there lest end 3d sing. subj. pass.

*ib dī'alail* · *iū* *beith formenne and arna'foirkne* · *a*  
 your religion then

*for'krabud* and, if ill-will and revenge be in every one of you towards another, there should be care lest your religion end then ; *dīgal* is compounded of *dī* from, and *gal* strife ; *formenme* thought on ; *arna* is *ar* to, in order to, and *na* relative negative ; *foirknea* is a

is 3d sing. neut. dem. this  
 denominative verb from *for'kenn* end. (13.) *Is* · *hed* *in* · *so*  
 what pray 1st sing. that attain to 2d pl. between knowledge art. God gen. and that  
*no'quid* · *im* *kon* · *duk* · *aid* *etar* · *gne* *n* · *dæ* *okus ko* ·  
 not be 3d sing. subj. darkness art. gen. pl. desire world ly gen. pl. on eye  
*na'ro* · *ib* *temel* *inna* *tol domun* · *d* · *e* *tarrosk*  
 your soul gen. sing. that be 3d sing. subj. clear eye your soul gen. sing.  
*forn* · *ann* · *e* *ko* · *ro* · *p* *feig rosk forn* · *ann* · *e*

this is what I pray that ye may attain to the knowledge of God, and that (the) darkness of worldly desires be not on (the) eye of your soul, that the eye of your soul be clear ; *duk* is compounded of *do* to, and *ik* reach or arrive at, *-aid* is the inflection of a dependent verb (120) ; *etargne* is a compound, distinguishing knowledge ; *dīa*, God, is declined irregularly ; *ro* is the verbal particle used with the subjunctive *ib* or *p* for *be* (118) ; *tol* is genitive plural like *rann* (111) ;

not be 3d pl. many faculty pl. to  
*anne* genitive singular of *anim*. (14.) *Nī* · *t* · *at* *il* · *dān* · *ī* *do*  
 one man dat. sing. and not one faculty to society dat. sing.

*oen* *fiur* *okus nī* *oen dān do soχuid* · *i*, many faculties  
 are not to one man, and not one faculty to many ; *nītat* is contracted from *nīataat*, from the verb substantive *ata* ; *dān* masculine noun, genitive *dano*, seems to make the plural not like *biθ*, but in *-i* ; *fiur* dative of *fer*, *soχuidi* dative of *soχuide* feminine.

do 2d pl. imper. what out bear 3d sing. subj. pass. to 2d pl. like as to  
 (15.) *Den* · *id* *an* · *as* · *ber* · *ar* *fr* · *ib*, *am no* · *d'u* ·  
 2d pl. love 1st sing. emph. love 3d sing. imper. every one of 2d pl. emph.

*b* · *kair* · *im* · *se* *kar* · *al* *kāχ* *na* · *ib* · *sī*  
 other accus. sing. not to with come 3d sing. imper. every one glory accus. sing. for

*alaile* *nī* *t* · *air* · *g* · *ed* *kāχ* *indokbail* *do*  
 himself come for his fellow dat. sing. be 3d sing. imper. noble comp.

*je'sin* *t* · *air* *k'ed dī* · *a* · *χīl* · *iū* *baīl* *uail* · *iū*

every one with another accus. than be 3d sing. rel. himself not look 3d sing imper.  
*kāχ li · alaile ol · da · as fessin na dek · ad*  
 art. faculty to give past part. to himself but faculty his fellow gen. sing.  
*in · dān dorrad · ad do fessin akt dān a · χēl · i,* do what  
 is told you, like as I love you, let every one of you love another, let  
 not every one gain glory for himself, let him gain for his fellow, let  
 every one be more noble with (in the opinion of) another than what is  
 himself, let him not regard the faculty given to himself, but the  
 faculty of his fellow; *nodubkairinse* (114); *tairged tairked* is trans-  
 lated by Zeuss *paret*, and is explained as the verb *ik* or *ig* to arrive,  
 doubly compounded with *do*, which he translates *ad*, and *air*, which  
 he translates *ad apud*; *indokbāl* from *indokbāl* feminine, declined  
 like *rann*; Zeuss supposes it a double compound, *ind · ol · gabāl*; it  
 seems more probably connected with the root *dek* like *δοκῶ δόξα*;  
*doradad* given to.

The following is an example of the impersonal inflection of the  
 passive: (16.) *Kor · ro · nert · am · ni kāχ hi*  
 suffering dat. sing. tribulation gen. pl. like as 1st pl. comfort 3d sing. subj. pass.  
*foditín forχid · e am no · n · nert · ar ·*  
 emph. 1st pl. of God  
*ni ho dia,* that *we* may comfort every one in the suffering of  
 tribulations like as it is comforted to *us* of God;<sup>1</sup> *ro* is the verbal  
 particle used before the subjunctive (118).

The Celtic race is distinguished amongst the Indo-European races  
 by quickness of thought; and accordingly their language shows a  
 tendency to break thought into smaller parts than any of the Indo-  
 European languages. This appears in the fragments of the pronouns  
 which are so much used, and which need to be strengthened by each  
 other more than in any of the kindred languages. It appears also in  
 the lightness with which some nouns are thought, so as to be used  
 like pronouns (114, 115). It appears most distinctly in the tendency  
 to reduce the root to such a fragment of thought that it has to be  
 compounded with one or two particles to express what in the other  
 languages is a simple idea; thus in Example 3, the compound *do·gnesu*  
 is translated by Zeuss *fac*; in 5, *di·oi·priū* *fraudatis*; in 10, *do·ind·*  
*nagar* *tribuitur*, *for·χom·olsam* *sustineamus*; in 11, *as·berar* *dicitur*;  
 in 15, *tairged* *paret*.

The lightness of the parts into which Celtic speech is broken is  
 doubtless connected with that intonation, as of singing, which may be  
 observed in the speaking of French and Irish. This kind of intona-  
 tion is to be observed also in the quick languages of Africa (Sect. I.,  
 48); and it arises from the light parts of the sentences being merged  
 in the whole; so that there is a tendency, instead of distinguishing  
 the parts with accentuation, to give expressiveness to the utterance of  
 the whole by inflections of the voice.

<sup>1</sup> Zeuss, p. 475.

## TEUTONIC.

132. Among the Teutonic languages, the High German which was spoken originally in the higher lands of the south,<sup>1</sup> but which now prevails over the whole of Germany, is distinguished from the other languages by some remarkable features. It has been divided by German philologists into three periods, called by them the Old, the Middle, and the New.

The other Teutonic languages are Gothic, Old Frisian, Old Saxon, Anglo-Saxon, Low German Middle and New, Dutch Middle and New, Old Norse, Swedish, Danish, Norwegian, English.

The principal attention here will be given to the Gothic, Anglo-Saxon, and Old High German.

The most striking difference between High German and the other Teutonic languages is that which is stated in Grimm's law of the changes of the mutes. That law is that the medial of the older Indo-European languages becomes in Teutonic a tenuis, the older tenuis an aspirate, the older aspirate a medial; but that in High German this transmutation is repeated, so that the medial of the other languages becomes in High German a tenuis, their tenuis an aspirate, their aspirate a medial. This law, however, does not prevail so generally in the middle and end of words as in the beginning, being interfered with in those positions by other tendencies.<sup>2</sup> And even in the beginning of a word it is subject to limitations.

For the Teutonic languages in their early period, as represented by the Gothic, had no true aspirate either in the labial or in the guttural order, but instead of aspirates the spirants *f* and *h*. These have not the closure of the organs interruptive of the breath which belongs to the mutes, and consequently they were exempted from the law of change; so that though an original *p* became *f* in Gothic, this *f* remained spirant in Old High German; and though an original *k* became *h* in Gothic, this *h* remained unchanged in Old High German.<sup>3</sup> In the dental order there was an aspirate in Gothic which became *d* in Old High German.

This want of an aspirate in the labial and guttural orders shows a weakness of the interruptive closure in the labial and guttural utterance as represented in Gothic, in consequence of which, when the breath broke through with an aspiration, the closure was not felt at all, and it was a spirant that was uttered. In consequence of this labial weakness *p* was unknown as an initial in Gothic except in foreign words, and *pp*, *bb*, *ff*, *vv*, had no place in it.<sup>4</sup> And though *k* occurred as an initial, it was probably uttered somewhat softly, for Ulphilas uses it for both *z* and *χ*;<sup>5</sup> and *hk* occurs only in foreign words, while *gg* was nasal.<sup>6</sup>

This weakness of utterance almost disappears in High German, the only traces of it being that Middle High German retains Gothic *b*

<sup>1</sup> Grimm, *Geschichte der Deutschen Sprache*, p. 482.

<sup>2</sup> *Ibid.* pp. 393, 394.

<sup>3</sup> *Ibid.* p. 395.

<sup>4</sup> Grimm, *Deutsche Grammatik*, i. pp. 55, 60.

<sup>5</sup> *Ibid.* p. 68.

<sup>6</sup> *Ibid.* pp. 71, 72.

and *g* in the beginning and middle of a word; and Notker's rule of writing Old High German (138) retains Gothic *b* and *g* in the beginning, if the preceding word end in a liquid or a vowel. High German, however, admits initial *p*, has true labial and guttural aspirates, and doubles the labials and the gutturals.<sup>1</sup> We do not in these languages distinguish post-palatals from gutturals.

The first step of the change of the mutes was accomplished, according to Grimm, by the Teutonic languages in the course of the first two centuries of our era, the second by the High German, about the seventh century.<sup>2</sup> Previously to both these transmutations, the Teutonic language must have had true aspirates, both labial and guttural, out of which they developed the medials. At that time, therefore, the breath did not break through in the utterance of a labial or guttural aspirate, so as to abolish the interruptive closure, but was let through after it. Was this because the closure was then stronger than it afterwards became, or because the pressure of the breath was weaker? Now, in the High German the new aspirate was uttered with more tension of the organs than the old. It was formed out of the old tenuis, not by relaxing the closure, for then the new aspirate would have been as soft as the old, but with maintenance of the tension of the organs. It was uttered with additional force of breath breaking through the closure, so that *t*, for example, became *ts*, which was stronger than the old aspirate *th*, as *ch* also was stronger than *h*, and *ph* than *f*. And in the parallel phenomenon, when the transmutation was taking place in Gothic, we must suppose that it was an access of breath which changed the old *p* into *f*, the old *k* into *h*, the old *t* into *th*, and that the former utterance of the language was with less pressure of breath. So uttered, the lips were capable of an initial *p*, and the lips and the back part of the tongue could interrupt the first pressure of the breath which was to break through with an aspiration, so as to utter true aspirates.

Now, the access of breath which tended to change the tenuis to an aspirate would tend also to change the medial to a tenuis, for in the increase of the current of breath the vocal chords would be relaxed to give it freer passage, the sonancy would in consequence be given up, and the breath would strike more hardly on the closure of the organs.

On the aspirate the effect would be, as on the tenuis, to overpower the closure, so as either to abolish it or to cause it to be less felt in the utterance. The former effect, however, would be hindered by the nature of the aspirate. For, whereas the tension of the organs in uttering the tenuis is a single act, that of the aspirate is a tension followed by a partial relaxation of the organs; and however this action were overpowered when affected with an access of breath, the beginning of the new utterance would be felt to be closer than the end. In both beginning and end the breath would predominate over the organ, and the action of the organ be less felt. The closure would become a weaker element of the utterance, and the relaxation which followed would let the breath pass without any sense of utter-

<sup>1</sup> Grimm, *Deutsche Grammatik*, pp. 129, 148, 184, 193, 194.

<sup>2</sup> Grimm, *Geschichte*, p. 437.

ance at all. The consequence would be that the new utterance of the aspirate as felt would be reduced to a soft interruption of the breath, and it would define itself as a medial.

133. The increase of breath in the utterance of the consonants seems to have affected the Teutonic vowels also, opening the vowel utterance when close, to give breath to the consonants, so as sometimes to cause the vowels to break or vary in the course of their utterance, and make two vowels to be heard instead of one.

The original Teutonic vocalisation, to judge from the Gothic, seems to have corresponded with that of Sanskrit, except that it had neither  $\bar{a}$  nor  $\bar{i}$ , but  $\bar{e}$  or  $\bar{o}$  instead of  $\bar{a}$ , and  $ei$  for  $\bar{i}$ , and that it had the peculiar diphthong  $i\bar{u}$ . Like Sanskrit, it had neither  $\check{e}$  nor  $\check{o}$ ; its vowels were  $a$ ,  $i$ ,  $u$ ,  $\bar{e}$ ,  $\bar{o}$ , and  $\bar{o}$ , and it had the diphthongs  $ai$  and  $au$ . The substitution of  $\bar{e}$  for  $\bar{a}$ , and  $ei$  for  $\bar{i}$ , indicates a somewhat less vocal character than Sanskrit, for it shows less attention to the distinct utterance of the vowels, the openness of  $\bar{a}$  and the closeness of  $\bar{i}$  being both eased in the intermediate vowel  $e$ . The diphthong  $i\bar{u}$  also seems to indicate a closeness of vowel utterance, as if there were an absence of the habit of a full vocalisation. It involves a palatal tendency such as may be observed in the English pronunciation of  $u$ , as, for example, in the word tube, pronounced tyube. But the Gothic  $i\bar{u}$  is not  $y\bar{u}$ , but a true diphthong, of which the stronger element is  $i$ .<sup>1</sup>

This original vocalisation of Gothic seems to have been somewhat altered by the additional breath in the utterance of the consonants. For before  $h$  and  $r$ , which demand breath for their utterance, the close vowels  $i$  and  $u$  became  $ai$  and  $au$ ; distinguished by Grimm as  $\acute{a}i$  and  $\acute{a}u$  from the diphthongs, which he writes  $\bar{a}i$  and  $\bar{a}u$ .<sup>2</sup> He considers  $\acute{a}i$  and  $\acute{a}u$  to have been originally long, though afterwards pronounced short, and used by Ulphilas for  $\epsilon$  and  $o$ ;  $\acute{a}i$  and  $\acute{a}u$  correspond to  $\alpha$  and  $\alpha\upsilon$ .<sup>3</sup> The breath supplied in larger measure to  $h$  and  $r$  opened the utterance of  $i$  and  $u$  as with  $a$  prefixed to pass the larger volume of the current of breath.

134. The Anglo-Saxon vocalisation also bears traces of the influence of this access of breath to the consonants; but under somewhat different forms from Gothic, owing to a difference of utterance. For Anglo-Saxon utterance is closer than Gothic; the organs are less opened. This seems to be due to the consonant engaging more interest than in Gothic and the vowel less; for the consonants are uttered with pressure of breath on closed or partially closed organs, and their predominance causes a tendency to reduce the openness of the current of breath, by virtue of the prevalent volitions of interruptive closure.

There is, however, a prolonged softness in doubled nasals, and in a nasal followed by a mute, which causes these combinations to have little pressure of the breath, so that  $a$  preceding them is not closed in sympathy with their interruptive closure, nor is  $i$  or  $u$  opened to supply more breath for pressure,<sup>4</sup> though sometimes  $a$  becomes  $o$ <sup>5</sup> in sympathy with the anterior closure of the nasal with continued sonancy.

<sup>1</sup> Grimm, Gram., i. p. 50.

<sup>2</sup> Ibid. i. p. 44; Grimm, Gesch., p. 277.

<sup>3</sup> Grimm, Gram., i. pp. 44-48.

<sup>4</sup> Ibid. i. pp. 223, 226, 227.

<sup>5</sup> Ibid. i. p. 224.

In general, *a* yields to the close tendency, and becomes *ä* when followed by a consonant. It remains *a* in the flexion endings or derivation endings -*a*, -*as*, -*an*, -*ath*, -*al*, perhaps because in these its significance maintained it; also before a single consonant, sometimes also before *st*, *sk*, *hl* (probably when uttered almost singly, 157), provided such consonants be followed by *a*, *o*, *u* of flexion or derivation syllable; but in this case, if *m* be the consonant, *a* sometimes becomes *o*; <sup>1</sup> also before final *m*, or *m* followed by final *e*, becoming, however, sometimes *o*.<sup>2</sup> The *ā* is represented in Anglo-Saxon by *e*.<sup>3</sup>

Now, *a* becomes *ea* before *ll*, *rr*, *rl*, *rn*, and before *l* or *r*, followed by *p*, *f*, *t*, *d*, *dh*, *k*, *g*, *h*, *m*, or *s*, also before *h*, *ht*, *hs*.<sup>4</sup>

These all require force of breath, and this reacted on the vowel, opening its habitually close utterance as it passed to the consonant, so that it began as *e* and ended as *a*.

Grimm says, "*ea ist zwar diphthongisch, aber beinahe kurz zu sprechen, d. h. gleich einem kurzen a mit flüchtig vorgeschlagenem e*."<sup>5</sup> *A*, *ä*, and *ea* all occur before single *l*, *r*, *p*, *f*, *t*, *d*, *dh*, *k*, *g*, and before *ft*, *st*.<sup>6</sup>

In accordance with this tendency of the close vowel utterance to be opened by the access of breath to the consonants, *i* and *u* of Gothic tend to become *e* and *o* in course of time.<sup>7</sup>

*I* of Gothic is apt to be represented in Anglo-Saxon by *e*, but before *h*, *ht*, Anglo-Saxon favours *i* on account of its close palatal tendency.<sup>8</sup>

Gothic *ai* is represented in Anglo-Saxon by *e*, *eo*,<sup>9</sup> but before those of the combinations mentioned above, which begin with *r*, Gothic *ai* is represented regularly in Anglo-Saxon by *eo*, "*diphthongische doch halbkurze aussprache mit blosser vorschlag des e*."<sup>10</sup>

The occurrence of *eo* in Anglo-Saxon where Gothic has *i* or *ai* seems to be due to the access of breath to the consonant, opening the vowel as it passed to the consonant. For the utterance in Anglo-Saxon being closer than in Gothic, the vowel maintained its closeness in the beginning, and was not opened till the end, where it was more opened in Anglo-Saxon than in Gothic in course of time from the longer action of the cause; as *ea* came from *a*, so the closer *eo* came from the closer *i*, *ai*.

No diphthong in Anglo-Saxon has the second vowel closer than the first, owing to this habit of retro-active opening of the vowels in the end of their utterance. And hence Gothic *ai* is represented in Anglo-Saxon by *ā*, and Gothic *au* by *ea*,<sup>11</sup> the second vowel in both being opened, and the first in the latter being closed. In *ai* *a* was more predominant than in *au*.

In Gothic *ai*, *u* predominated over *a*. In Anglo-Saxon *u* is opened and *a* is assimilated, and *ai* becomes *o*.<sup>12</sup>

<sup>1</sup> Grimm, Gram., i. pp. 223, 224.

<sup>4</sup> Ibid. i. p. 236.

<sup>7</sup> Ibid. i. pp. 226, 227.

<sup>10</sup> Ibid. i. pp. 239, 240.

<sup>2</sup> Ibid. i. pp. 232, 233.

<sup>5</sup> Ibid. i. p. 238.

<sup>8</sup> Ibid. i. p. 226.

<sup>11</sup> Ibid. i. pp. 228, 238.

<sup>3</sup> Ibid. i. p. 235.

<sup>6</sup> Ibid. i. p. 237.

<sup>9</sup> Ibid. i. pp. 81, 226.

<sup>12</sup> Ibid. i. p. 227.

The diphthong *ei* is contrary to the habit of Anglo-Saxon utterance, and *i*, for which it is used in Gothic, takes its place in Anglo-Saxon.<sup>1</sup>

The diphthong *iu* is sometimes represented in Anglo-Saxon by *eo*,<sup>2</sup> the second vowel being as usual opened, and the first reduced, losing in its reduction its distinctive closeness. Sometimes it is represented by long *ü*,<sup>3</sup> the *u* having absorbed the *i*.

The closeness of Anglo-Saxon utterance is to be seen in *y* and *w* or *u* closing into *g*.<sup>4</sup>

135. Old Norse had a tendency to vocalisation which perhaps was due to Finnish influence (IV. 147). The vowels were generally lengthened, at least in the later pronunciation, when they were not followed immediately by a consonant utterance which was felt with distinctness after them. Thus *a*, *i*, *u*, and *o* were lengthened at the end of a word and before *nk*, *ng*, in which *n* is half merged in *k* and *g*; *a* and *o* were lengthened also before *lm*, *lp*, *lj*, *lk*, *lg*, and *tt* (for *ht*), *a* also before *s* (for *ns*); *u* was lengthened also before *lj* and *s* (for *ns*); *e* is lengthened only before *tt* (for *ht*).<sup>5</sup> The guttural openness of *a* and *o* weakened *l* before any consonant but a dental; *u* weakened *l* in *lj* by its affinity for *f*; and thus room was made for the lengthening of the vowel. But *e* became *ia* before *ld*, *ls*, *rr*, *rl*, *rm*, *rn*, *rd*, *rk*, *rg*, probably also at an earlier period before *lm*, *lp*, *lj*, *lk*, *lg*; it varied between *e* and *ia* before *ll*, *lt*, *ly*, *rf*, *rt*, *rdh*, *l*, *r*, *f*, *t*, *dh*, *s*, *g*, *k*; "*ia ist fast einfacher laut mit leise vorschlagendem i*."<sup>6</sup> This change of *e* comes from the access of breath to the consonants, and the tendency of the language to vocalisation; the consonant utterance which demanded most breath opened the vowel in the transition of the latter to it, making the beginning of *e* to be felt as *i*. From the action of the breath also, Gothic *i* and *u* tended to become *e* and *o*; and from the assimilation of the vowels in course of time, Gothic *ai* tended to become *e*, Gothic *au* to become *o*.<sup>7</sup> Gothic *ē* is represented by *ā*,<sup>8</sup> Gothic *iu* by *io*; <sup>9</sup> but *iu* had also by the assimilation of its vowels in course of time become long *ü*,<sup>10</sup> or at the end of a word *ie*, *ē*.<sup>11</sup>

136. In Old High German the older combinations of open and close vowel which were in Gothic, had in course of time been eased and simplified in utterance by assimilation of one vowel to another. In this way *ai* and *au* had generally become *e* and *o*; and *ai* and *au* had generally become *ei* and *ou*.<sup>12</sup> But the additional access of breath which the consonants received reacted on the vowels, opening them more or less according to its strength, where they had remained close. Thus Gothic *i* and *u* tend to be represented in High German by *e* and *o*, and Gothic *iu* by *io*, *eo*.<sup>13</sup> But before two consonants *i* and *u* were slower to change owing to the strong interruption of the breath.<sup>14</sup>

Before the spirants *h*, *s*, and *v*, the diphthongs *ei* and *ou* (Gothic *ai* and *au*) had their close second vowels opened by the breath which

<sup>1</sup> Grimm, Gram., i. p. 230.

<sup>2</sup> Ibid. i. p. 240.

<sup>3</sup> Ibid. i. p. 231.

<sup>4</sup> Ibid. i. p. 259-261.

<sup>5</sup> Ibid. i. p. 286-291.

<sup>6</sup> Ibid. i. pp. 296, 297.

<sup>7</sup> Ibid. i. pp. 282, 284.

<sup>8</sup> Ibid. i. p. 285.

<sup>9</sup> Ibid. i. p. 298.

<sup>10</sup> Ibid. i. p. 291.

<sup>11</sup> Ibid. i. p. 288.

<sup>12</sup> Ibid. i. pp. 80, 84, 99, 101.

<sup>13</sup> Ibid. pp. 81, 84, 102, 106.

<sup>14</sup> Ibid. i. pp. 83, 86.

the spirants demanded, and became  $\bar{e}$  and  $\bar{o}$ . This change took place in *ou* before the dentals also,<sup>1</sup> as if the dental closure caused an indisposition for the degree of anterior labial closure which is required for the utterance of *u*.

137. Old High German had a fuller vocalisation than Gothic. It had  $\bar{a}$  and  $\bar{i}$ , which Gothic had reduced to  $\bar{e}$  and  $\bar{e}i$ .<sup>2</sup> From an older  $\bar{o}$  it had developed *ou*,  $\bar{u}o$ ,  $\bar{u}a$ .<sup>3</sup> And when  $\bar{e}$  (Gothic  $\bar{ai}$ ) was followed by *v*, *v* was vocalised to *u* or *o*.<sup>4</sup> (147).

138. The pressure of breath from the chest in uttering the consonants, which, increased by two successive steps, produced the changes of the mutes as stated in Grimm's law, explains also the principal exceptions to that law. It arose from an increased volition to carry expression through (Def. 25), and this caused an increased current of breath through the word, which was stopped at the end of the word, with increase of pressure there. And the increased transmission of the breath in the middle tended to relax the interruptions of the breath, the closure of the organ yielding to the breath to let it through for the utterance of the rest of the word.

In Gothic the old *p*, and sometimes the old *k*, being weak utterances (132), instead of holding with aspiration the breath which came on them in the middle of the word, yielded it for the utterance of the rest of the word, relaxing the tension so as to become medial, instead of becoming aspirates according to the law.<sup>5</sup> The new medials in the middle of the word resisted the breath so little that they remained,<sup>6</sup> but in the end the pressure of the breath on them was such that it passed through with an utterance and they became aspirates, unless when preceded by a liquid,<sup>7</sup> which took up the breath in its own utterance and relieved the pressure. Thus *b* and *d* at the end became *f* and *θ*, but *h* had not enough tension for the repression of the breath which took place at the end of the word, and the new *g* remained.<sup>8</sup>

In Anglo-Saxon the consonants were stronger (134), and in Old Norse the current of breath was less (see below); so that in both the transmission of the breath in the middle of a word was reduced. The old *p* became *f* in the middle and end of the word according to Grimm's law,<sup>9</sup> but the old *ph*, instead of yielding the aspiration in the middle of the word, retained it and became *f*, except when double or after nasal.<sup>10</sup> At the end of a word the new *b* was replaced by *f*, and in Anglo-Saxon after a long vowel *g* became *h*;<sup>11</sup> but in Old Norse final *g* did not become *h*, but was dropped in the preterite;<sup>12</sup> *d* was confused with *dh* in the middle and end of the word in Anglo-Saxon and Old Norse, *d* being preserved in Old Norse by *l*, *m*, or *n* preceding it,<sup>13</sup> and taking up the breath in its own utterance so as to prevent the aspiration, and in Anglo-Saxon similarly by *l*, *n*, or *r* preceding it.<sup>14</sup>

In Old Saxon and Old Frisian the consonants were softer than in

<sup>1</sup> Grimm, Gram., i. pp. 90, 94.

<sup>2</sup> Ibid. i. pp. 86, 93.

<sup>3</sup> Ibid. i. p. 111.

<sup>4</sup> Ibid. i. p. 90.

<sup>5</sup> Grimm, Gesch., pp. 407, 409.

<sup>6</sup> Grimm, Gram., pp. 61, 69, 586.

<sup>7</sup> Ibid. pp. 55, 62.

<sup>8</sup> Ibid. p. 69.

<sup>9</sup> Grimm, Gesch., p. 407.

<sup>10</sup> Grimm, Gram., pp. 247, 310.

<sup>11</sup> Ibid. pp. 247, 259, 310.

<sup>12</sup> Ibid. p. 321.

<sup>13</sup> Ibid. i. p. 315.

<sup>14</sup> Ibid. i. p. 252.



Anglo-Saxon, and in them the new *b* in the middle of a word was replaced by *bh* instead of *f*.<sup>1</sup>

In High German the new aspirate *z* (*ts*) became *ss* after a vowel in the middle and end of a word.<sup>2</sup> And in the end of a word the new medials resisted the pressure of the breath, and sometimes in Old High German, as a rule in Middle High German, became tenuous,<sup>3</sup> while in Old High German *r* became *f*, and in Middle High German *v* and *h* became *f* and *z* in the end of a word.<sup>4</sup>

In High German the older *k*, which in the beginning of the word was only sometimes aspirated, in the Middle High German scarcely ever, was generally aspirated by the breath of the middle and end of the word, especially after a vowel. But in Middle High German the old *g* was preserved generally in the beginning and middle of a word, and the old *b* also.<sup>5</sup>

The Allemannian dialect of the Old High German, as it was written at St. Gall by Notker (A.D. 900) and his companions, shows a tendency to a weak closure of the organs in the utterance of the labial and guttural mutes which corresponds to what has been observed in 132; and on the other hand a tendency to a strong closure in the utterance of the dentals, which corresponds to the general increase of strength in the High German consonants. Their rule in writing is that the old *b* and *g* are not changed to *p* and *k* in the beginning of a word if the preceding word end in a vowel or liquid, unless this is separated by concluding a sentence; but that the old *th* at the beginning of a word, which begins a sentence or follows a spirant or mute, instead of becoming *d* becomes *t*.<sup>6</sup>

As the pressure of breath changed the mutes, so a liquid or spirant or smooth aspirate preceding the mute often prevented the change by taking up the breath in its own utterance. Thus in Old High German the older *p*, and at first the older *k*, was preserved after *s*; <sup>7</sup> in Old and Middle High German the older *t* after *h*, *s*, or *f*, and before *r*; <sup>8</sup> and in the Old High German the older *k* often after *l*, *n*, *s*, or *r*.<sup>9</sup>

Owing to the pressure of breath with which the Teutonic mutes were uttered, they generally required when immediately preceded by another consonant that this should be a smooth aspirate or spirant to let breath come to them. Thus in Gothic before *t* of second preterite and before *-t* of substantives, *p* and *b* became *f*, *k* and *g* became *h*, *t* *d* and *th* became *s*. Final *s* also in Gothic sometimes aspirated *b* and *d* preceding it to get breath.<sup>10</sup>

Old Norse, Swedish, and Danish are exceptions to the above rule; for Old Norse has *pt*,<sup>11</sup> Swedish has *kt*,<sup>12</sup> Danish has *gt*,<sup>13</sup> but *kt*, *gt* also became *tt*. These languages came under the influence of the Finnish language (171), which has no aspirates, tends to form double letters

<sup>1</sup> Grimm, Gram., i. pp. 212, 275.

<sup>2</sup> Ibid. i. pp. 165, 413.

<sup>3</sup> Ibid. i. pp. 131, 157, 182, 377.

<sup>4</sup> Ibid. i. pp. 137, 378.

<sup>5</sup> Ibid. i. pp. 183-186, 396, 423, 428.

<sup>6</sup> Grimm, Gesch., p. 364-366; Gram., i. pp. 130, 153 note, 181.

<sup>7</sup> Grimm, Gram., i. pp. 129, 179.

<sup>8</sup> Ibid. i. pp. 154, 413.

<sup>9</sup> Ibid. i. p. 181.

<sup>10</sup> Grimm, Gesch., pp. 362, 363.

<sup>11</sup> Grimm, Gram., i. p. 313.

<sup>12</sup> Ibid. i. p. 557.

<sup>13</sup> Ibid. i. p. 570.

by assimilation, and utters its consonants lightly, with little pressure of breath (IV. 147).

Besides the above causes of exceptions to Grimm's law, the High German authorities vary in the mutes, some of them being under the influence of the more northern languages more than others.<sup>1</sup> And according to Grimm some words also retained the old utterance; the stream of change flowed past them and left them unmoved.<sup>2</sup>

139. The Teutonic languages are some harder than others in the utterance of the consonants. The High German shows hardness in changing the medial to tenuis in the end of a word. And to this Grimm compares its intolerance of double liquids in the end of a word;<sup>3</sup> which certainly indicates a habit of stronger interruption of the breath in the utterance of the consonant. In this respect Anglo-Saxon agrees with High German, showing itself harder than Old Saxon, which admits double liquids at the end of the word;<sup>4</sup> as it also changes *b* to *f* in the middle of the word, while Old Saxon changes *b* to *bh*.

High German also shows its hardness in having instead of *f* the labial aspirate *pf* used in Middle High German always in the beginning of the word and after short vowels or *m* in the middle and end,<sup>5</sup> in aspirating *t* with *s* instead of with *h*, and in its guttural aspirate.<sup>6</sup> It also admitted *p* as an initial, of which, moreover, Anglo-Saxon was somewhat more tolerant than Gothic,<sup>7</sup> and both High German and Anglo-Saxon doubled labials and gutturals.<sup>8</sup>

The natural tendency, however, as time goes on, is to ease the utterance, and so *s* was gradually softened in the Teutonic languages to *z* and *r*, especially after a vowel. But this change of *s* to *r* was carried farther in Old Norse than in any other of the languages.<sup>9</sup>

140. The increased pressure of breath from the chest is accompanied in High German, as has been observed in other languages, by the development of a more guttural utterance (V. 50, 75; VI. 80, 107).

And probably the Finnish influence, acting on the Swedish and the Danish, and reducing the breath from the chest in uttering the consonants, caused the so-called gutturals to become palatal or ante-palatal in the beginning of a word before *e*, *i*, *ä*, *ö*, or *ü*.<sup>10</sup> This change Grimm considers not proved for Old Norse,<sup>11</sup> and denies it in Anglo-Saxon.<sup>12</sup> In Old Frisian he supposes that *k* in this position was uttered strongly and with an aspiration, as in certain words it passed into *sz*, *sth*, *tz*.<sup>13</sup> The new utterance was represented in Swedish by *ty* or *ky*, in Danish by *ky*<sup>10</sup> (176). To Finnish influence is probably also due the softening of the consonants and the tendency to double them in the Norse languages<sup>10</sup> (179).

141. The accent of the word in the Teutonic languages lengthened in course of time the vowel on which it fell, unless when followed by

<sup>1</sup> Grimm, *Gesch.*, p. 424.

<sup>2</sup> Ibid. i. pp. 122, 378.

<sup>3</sup> Ibid. i. p. 396-398.

<sup>4</sup> Grimm, *Gram.*, i. pp. 129, 247.

<sup>5</sup> Ibid. i. pp. 64, 305.

<sup>6</sup> Ibid. i. p. 321.

<sup>7</sup> Grimm, *Gram.*, i. p. 590.

<sup>8</sup> Ibid. i. pp. 210, 245.

<sup>9</sup> Grimm, *Gesch.*, pp. 394, 395.

<sup>10</sup> Ibid. i. pp. 148, 193, 250, 264-266.

<sup>11</sup> Ibid. i. pp. 555, 563, 564, 568.

<sup>12</sup> Ibid. i. pp. 257, 258.

<sup>13</sup> Ibid. i. p. 277.

a double consonant, and weakened the unaccented syllables, so that the vowels of the endings all tended to be reduced to *e* or *i* in the later languages, and the unaccented syllables to be curtailed.<sup>1</sup>

142. One of the most remarkable features in the Teutonic languages is the umlaut, by which word Grimm denotes the change produced in the vowel of the root by *i* or later by *e*, sometimes by *u*, in a formative syllable, which change sometimes remains though the *i* or *u* is dropped, sometimes disappears with the *i* or *u*.<sup>2</sup> The umlaut has a resemblance to the infections to which the Celtic vowels are so subject (93, 94), and like these it was developed only in later times in the Teutonic languages, so that it does not appear at all in Gothic.<sup>3</sup> But it is strikingly distinguished from the Celtic infections in being limited to the root. The formative syllables are liable indeed to have their vowels changed, the vowel of one into that of another; but this is called by Grimm assimilation<sup>4</sup> in order to distinguish it from the partial change or umlaut to which the vowel of the root is subject. The remarkable circumstance in the umlaut is that it is the strong accented syllable of the root which is subject to it, and that the influence to which this syllable yields comes from the comparatively weak formative syllable; nay, that in the course of time as the formative syllables grew weaker and the radical syllable more predominant the umlaut of the latter was more extensively developed.<sup>5</sup> This is not a case of mere phonetic action. In such action it is the strong accented vowel that would tend to affect the weak unaccented vowel with a partial assimilation to itself. Here it dominates over the latter in another way, namely, by absorbing it into itself, and this must be by a mental action. The facts can be understood only as indicating that the root takes the umlaut in consequence of the radical element of thought absorbing into itself more and more the minor elements which complete the idea of the word, so that the expression of the former is more and more affected by that of the latter, according as the idea of the word grows in singleness and concentration. And so understood, the umlaut is to be classed with the changes which take place in language as inflections decay; but it owes its special form to another feature of the Teutonic languages, in connection with which it will be considered further on (173).

But though the umlaut is characteristic rather of Teutonic thought than of Teutonic utterance, it is of course affected by phonetic influences.

It is always the formative syllable weakened by the predominance of the accented syllable which affects the vowel of the root; and so weakened, no vowel except *e* or *i* is sufficiently distinct in the muscular action of its utterance to effect the change. All the unaccented vowels tended to become *e* or *i* (141); and the umlaut is always an infusion of *i* or *e* into the radical vowel, except in the Norse languages. In these, owing apparently to the influence of the Finnish language, in which the vowels are strong (IV. 147), *u* in a formative syllable or *a* has sometimes sufficient distinctness to affect the vowel of the root

<sup>1</sup> Grimm, Gram., i. pp. 114, 119, 243, 367, 373, 577.

<sup>3</sup> Ibid. i. pp. 10, 51.

<sup>4</sup> Ibid. i. pp. 117, 576.

<sup>2</sup> Ibid. i. p. 9.

<sup>5</sup> Ibid. i. p. 10.

with the umlaut.<sup>1</sup> In the other languages the strong radical vowel is not affected with umlaut by the indistinct *a*, *o*, or *u* of a formative syllable, but by the more distinct *i* or *e*, so that the radical *a*, *o*, *u*, becomes *e*, *ö*, *ü*.<sup>2</sup> On the other hand, the vowel of one formative syllable is weak enough to be assimilated by that of another, no matter what vowel the latter may be, so that in Old High German *o* may thus be assimilated to *a*, *e* to *a*, *a* to *e*, *a* to *i*, *a* to *o*, *a* to *u*, *u* to *o*.<sup>3</sup> It is remarkable that it is the vowel of the syllable which precedes that is assimilated by the vowel of that which follows, as if the final element, in being added to the preceding element to be thought with it in the unity of the whole idea, had an advantage over it in being thought last in completing the idea.

In Old High German the umlaut of *a* in the root to *e*, by *i* following, began probably in the sixth and seventh century, affecting it first when followed by a single consonant; *a* followed by two consonants began to be affected in the ninth century. It was later still that the influence of *i* reached over an intervening syllable to affect *a* in the root. It is remarkable that compound words were less subject to the umlaut, because it required unity of idea. In Old High German there was no umlaut of *ā*, *o*, *ō*, or *u*; but in the tenth century *ū* began to show umlaut as *iu*.<sup>4</sup> There was a Teutonic tendency to this diphthong (133), but it required a long vowel to admit it as umlaut.

In Old Saxon there was an umlaut only of *a* to *e*.<sup>5</sup>

In Anglo-Saxon the umlaut changes not only *a* to *e*, but *u* to *ü*, *ā* to *æ*, *ō* to *ē*, *ū* to long *ū*, *ēā* to long *ū*; and often the *e* or *i* which causes the umlaut is itself dropped by syncope or apocope, yet the umlaut remains.<sup>6</sup> This great development of the umlaut no doubt arises from the Anglo-Saxon tendency to close the vowels (134).

In Old Norse the umlaut which proceeded from *i* changed *a* to *e*, *u* to *ü*, *ā* to *æ*, *ō* to *æ*, *ū* to long *ū*, *au* to *eü*, *io* to *i*; but also *u* changed *a* to *ö*, *ia* to *iö*, *ā* to *au*. And, as in Anglo-Saxon, the *i* or *u* which causes the umlaut is often dropped, while the umlaut remains; but when *i* is dropped by syncope, *a* sometimes comes back, unless when followed by two consonants.<sup>7</sup> The great development of the umlaut in Old Norse is probably due to the distinctness of the unaccented vowels. In Swedish and Danish the umlaut from *u* is found only in a few instances.<sup>8</sup>

In Middle High German every accented vowel which ended a syllable was long,<sup>9</sup> while the *i* or *ī* which produced umlaut was (with the exception of *-inc*, *-in*, *-ic*, *-isch*) reduced to unaccented *e*, scarcely distinguished from *e*. The umlauts were *a* to *e*, *o* to *ö*, *u* to *ü*, *ā* to *æ*, *ō* to *æ*, *ū* to *iu*, *ou* to *öu*, *uo* to *ue*. No other vowel but *e*, which has been *i* or *ī*, can give the umlaut to *a*, *o*, *u*. The umlaut of *a* to *e* was established in the ninth century, that of *ū* to *iu* in the tenth, the others in the eleventh and twelfth. The umlaut remains often after *i* has been dropped.<sup>10</sup>

<sup>1</sup> Grimm, Gram., i. p. 576.

<sup>4</sup> Ibid. i. p. 77-79.

<sup>7</sup> Ibid. i. pp. 281, 303.

<sup>2</sup> Ibid. i. p. 9.

<sup>5</sup> Ibid. i. p. 209.

<sup>8</sup> Ibid. i. pp. 551, 563.

<sup>10</sup> Ibid. i. p. 361, 362.

<sup>3</sup> Ibid. i. pp. 117, 118.

<sup>6</sup> Ibid. i. p. 243.

<sup>9</sup> Ibid. i. p. 331.

In High German the umlaut could be given only by an *i* which touched the root by beginning the syllable next after it; except when an *i* beginning a third syllable had first assimilated the *i* of a preceding syllable, which then gave the umlaut to the root. But in the thirteenth century umlauts came in where the *i* did not begin its syllable.<sup>1</sup>

143. The following is the Gothic declension, in which the dative case serves also for the ablative and instrumental:<sup>2</sup>

	Strong masc. 1st declension.		Strong masc. 2d declension.			
	sing.	plural.	sing.	plural.	sing.	plural.
Nom.	<i>fisk's</i>	<i>fisk'ōs</i>	<i>har'ys</i>	<i>har'yōs</i>	<i>haird'eis</i>	<i>haird'yōs</i>
Gen.	<i>fisk'is</i>	<i>fisk'ē</i>	<i>har'ys</i>	<i>har'yē</i>	<i>haird'eis</i>	<i>haird'yē</i>
Dat.	<i>fisk'a</i>	<i>fisk'am</i>	<i>har'ya</i>	<i>har'yam</i>	<i>haird'ya</i>	<i>haird'yam</i>
Accus.	<i>fisk</i>	<i>fisk'ans</i>	<i>har'i</i>	<i>har'yans</i>	<i>haird'i</i>	<i>haird'yans</i>
Voc.	<i>fisk</i>		<i>har'i</i>		<i>haird'i</i>	

	Strong masc. and fem. 3d declension.		Strong masc. 4th declension.		Strong fem. 1st declension.		Strong fem. 2d declension.	
	sing.	plural.	sing.	plural.	sing.	plural.	sing.	plural.
Nom.	<i>sun'us</i>	<i>sun'yus</i>	<i>balg's</i>	<i>balg'eis</i>	<i>gib'a</i>	<i>gib'ōs</i>	<i>θiv'i</i>	<i>θiv'yōs</i>
Gen.	<i>sun'aus</i>	<i>sun'irē</i>	<i>balg'is</i>	<i>balg'ē</i>	<i>gib'ōs</i>	<i>gib'ō</i>	<i>θiv'yōs</i>	<i>θiv'yō</i>
Dat.	<i>sun'au</i>	<i>sun'um</i>	<i>balg'a</i>	<i>balg'im</i>	<i>gib'ai</i>	<i>gib'ōm</i>	<i>θiv'yai</i>	<i>θiv'yōm</i>
Accus.	<i>sun'u</i>	<i>sun'uns</i>	<i>balg</i>	<i>balg'ins</i>	<i>gib'a</i>	<i>gib'ōs</i>	<i>θiv'ya</i>	<i>θiv'yōs</i>
Voc.	<i>sun'au</i>		<i>balg</i>				<i>θiv'i</i>	

	Strong fem. 4th declension.		Strong neuter 1st declension.		Strong neuter 2d declension.	
	sing.	plural.	sing.	plural.	sing.	plural.
Nom. . .	<i>anst's</i>	<i>anst'eis</i>	<i>vaūrd</i>	<i>vaūrd'a</i>	<i>kun'i</i>	<i>kun'ya</i>
Gen. . .	<i>anst'ais</i>	<i>anst'ē</i>	<i>vaūrd'is</i>	<i>vaūrd'ē</i>	<i>kun'ys</i>	<i>kun'yē</i>
Dat. . .	<i>anst'ai</i>	<i>anst'im</i>	<i>vaūrd'a</i>	<i>vaūrd'am</i>	<i>kun'ya</i>	<i>'kun'yam</i>
Accus. . .	<i>anst</i>	<i>anst'ins</i>	<i>vaūrd</i>	<i>vaūrd'a</i>	<i>kun'i</i>	<i>kun'ya</i>

There is a strong feminine third declension, including only five or six nouns declined like the masculine. The strong neuter third

<sup>1</sup> Grimm, Gram., i. p. 363-365.

<sup>2</sup> Ibid. i. p. 597-606.

declension is limited to singular of *faþhu*, which has genitive *faþh'aus*, dative *faþh'au*. The old formative ending of the stems seems to be preserved before *m* in the ending of the dative plural, except that *i* is used with stems ending in a consonant as well as with those in *i*, and *ō* corresponds to Sanskrit *ā*.

Substantives which denote sensible objects, and which involve sex or gender in their radical idea, are principally of the fourth declension, but those which have an abstract signification are generally of the first,<sup>1</sup> for they need an additional thought of substance (Def. 4), expressed by *a* (8), while the former involve this in their idea.

In the nominative *har'γis* the *a* has fallen to *i*, and when the stem was polysyllabic or had a long syllable, *γa* in nominative and genitive singular was contracted to *ī*, which is represented in Gothic by *ei*<sup>2</sup> (133). The formative vowel of the stem was generally dropped or shortened in the nominative singular.

The old ending of the genitive singular *-γas* (9) was reduced to *-is* or *-s*.

Stems ending in *-u*, and feminines in *-i*, took up the *a* of *γas*, and formed the genitive singular in *-aus* and *-ais*, corresponding to Sanskrit *-ōs* and *-īs*; but in proper names, which, owing to their concrete nature, are thought more clear of the relation, the genitive ending *-is* was separate from the stem; as *Jesu'is*.<sup>3</sup>

In the dative singular these stems take up in the same way the dative ending *-a*, which is the sole residue of *ab'γa* (11) in all except the feminine *-a* stems, which retain the *i*; the *-a* of the dative is confounded with that of the *-a* stems.

The vocative *sunau* corresponds to that of Sanskrit *-u* stems (4).

The ending of the nominative plural is *-as* (4), which added to *-a* of the stem makes *-ās*, and is represented by *-ōs*; but in the fourth declension of stems ending in a consonant it seems rather to be *-γas* (9), contracted to *-eis*; and in the third declension the *γ* was perhaps taken up from *-γas*, or perhaps was inserted on account of the phonetic tendency to put *i* before *u* (133). The *-a* of the neuter corresponds to Latin and Greek.

A similar alternative of suppositions may be made for *sunivē* as for *sunyus*, there being perhaps originally *γa* in the ending of the genitive plural, which was absorbed by the final vowel of the stem in Sanskrit, and lengthened it (13). Is it owing to the influence of such an element that the genitive plural has *ē* instead of *ō* for Sanskrit *ā*, except with the feminine *ā* stems, whose *ā* overpowered the *γ*? (111).

The *m* of the dative plural doubtless represents the old *b'* of *b'γas* (4).

The *ns* of the accusative plural is a remarkable preservation of the marks of case and number (62), but only in masculine nouns (14).

Of neuter nouns the nominative and the accusative were the same; and in the genitive singular *-γis* was not contracted to *eis* after long roots, as if it was more independent and less closely united than in masculine nouns.

144. There is also in all the Teutonic languages a weak declension, as Grimm has called it, which has arisen from the insertion of *n*

<sup>1</sup> Grimm, Gram., iii. p. 493.

<sup>2</sup> Ibid. i. p. 599.

<sup>3</sup> Ibid. i. p. 601.

or *an* between the stem and the element of case or number.<sup>1</sup> It is used with stems which have got a special application, as Gothic *kaur̥n* corn, used to denote a grain, *bandra* a sign, used to denote a concerted signal, or those which have taken up strong associations, as of action, life, movement.<sup>2</sup> In either case there is a fulness and strength of idea which can never belong to a root, and in consequence of which the stem cannot so readily take up a sense of correlation, or that of individuals constituting a plurality. The thought of the substantive object as thus connected in a relation or a plurality required a distinct act of attention directed to it, and this was expressed by the pronominal element *n* or *an*. It is in fact an arthritic formation (Def. 7), such as is found in languages of the most diverse families (see V. 61, and the references there), in which a pronominal element is attached to a noun or nominal stem, and refers to it to facilitate its being taken in its present connections (147). The weak declension seems to indicate a weakness (170) of the objective part, or element of substance in the substantive idea (Def. 4), owing to a strengthening of the attributive part.

145. In the Gothic weak declension (148), *n* was inserted when the stem ended in *ei*. Otherwise *an* was used, the *a* taking the place of the final vowel of masculine stems, and being taken up by the original final vowel of feminine and neuter stems into *ō*, which corresponds to *ā*. In the nominative singular *n* and *s* were dropped; but in the nominative plural *n* or *an* was inserted, as above described, between the stem and the *s* of plurality, and in the other cases between the stem and the element of case. In the dative plural and the accusative plural the *n* was absorbed by the following nasal. In the genitive singular and dative singular the original *ya* which belonged to the element of case (4, 9, 11) having been contracted to *i*, assimilated to itself the final vowel of the stem, and was afterwards dropped. But in both cases the *ō* and the *ei* of the feminine nouns resisted this change. The accusative singular has dropped its case ending in the weak declensions of all the stems, as in the strong.<sup>3</sup>

The substantive stems in *-ei* denote pure abstracts of adjectives, qualities thought specially as substantives.<sup>4</sup>

146. The following are the stem and case endings in the Anglo-Saxon declensions: <sup>5</sup>

*Strong.*

	Masc. 1st Decl.		Masc. 2d Decl.		Fem. 1st Decl.		Fem. 4th Decl.		Neuter 1st Declension.				Neuter 2d Decl.	
	sing.	pl.	sing.	pl.	sing.	pl.	sing.	pl.	sing.	pl.	sing.	pl.	sing.	pl.
Nominative .	—	-as	-e	-as	-u	-a	—	-a	—	—	—	-u	-e	-u
Genitive . .	-es	-a	-es	-a	-e	-ena	-e	-a	-es	-a	-es	-a	-es	-a
Dative . . .	-e	-um	-e	-um	-e	-um	-e	-um	-e	-um	-e	-um	-e	-um
Accusative .	—	-as	-e	-as	-e	-a	-e	-a	—	—	—	-u	-e	-u

<sup>1</sup> Grimm, Gram., i. p. 597.

<sup>2</sup> Ibid. i. p. 821; iv. pp. 510, 511.

<sup>3</sup> Ibid. i. p. 607-609.

<sup>4</sup> Ibid. iii. p. 504.

<sup>5</sup> Ibid. i. p. 638-647.

In the weak declension the nominative singular of masculine has *-a*, of feminine and neuter *-e*; the other cases singular of both have *-an*, except accusative singular neuter *-e*; the plural cases of all have nominative *-an*, genitive *-ena*, dative *-um*, accusative *-an*.

In the strong declension the vowels of the genitive and dative singular have all fallen to *e*, and those of the dative plural to *u*, on account of its affinity to *m*.

In the other cases the correspondences with the old vowels and with Gothic are:

Old.	Gothic.	Anglo-Saxon.	Old.	Gothic.	Anglo-Saxon.
<i>ya</i>	<i>yi, i</i>	<i>e</i>	<i>ā</i>	<i>ē, ō</i>	<i>a</i>
<i>ā</i>	<i>a</i>	<i>u</i>	<i>yu</i>	<i>ei</i>	<i>a</i>

The *y* of the Gothic stem ending is always dropped in Anglo-Saxon, but there is a trace of it in the old plural masculine second declension *-eas*. The *s* of the nominative and accusative plural feminine is dropped, having been perhaps weakened by the naturally long vowel which preceded it. The genitive plural feminine first declension *-ena* belongs to the weak declension (147). The accusative plural masculine first and second declension has dropped *n*. There are also a few *-u* stems of irregular declension. The nouns of the fourth declension masculine have gone over to the first and second; and those of the second feminine end in *-o*, which does not change in the singular. There are no third feminines.

In the weak declension, Grimm conjectures that all the vowels of the endings of the feminine are long except that of the dative plural.<sup>1</sup> This would lead to the conjecture that the masculine stem ended originally in *a*, and the feminine in *ā*; that *ā* was closed to *ē* in the nominative singular; but that in the other cases except genitive and dative plural both *a* and *ā* were preserved by the *n* which followed them, and which perhaps was strengthened by the dropping of the case ending so as to have something of the prolonged softness of the double nasal or nasalised mute (134). In the genitive plural *a* and *ā* were closed to *e* and *ē*. And in the nominative and accusative singular of the neuter the *a* was weakened to *e*, the original ending having been weaker than masculine *-as*.

147. The endings of the Old High German declensions are on the opposite page.<sup>2</sup>

The original *ā* is preserved in the nominative plural first and second masculine, though in Gothic it had become *ō*; and the *ā* of the genitive plural, which in Gothic was *ē*, has become *ō*. The *y* has absorbed the *u* in the nominative plural third declension and become *ī*; as it has absorbed also the *a* of the stem ending in the second feminine and become *ī*, except in the dative plural, in which it is *ī*, and in the genitive plural, in which it is dropped. In the genitive plural of the second feminine, and throughout the first feminine, the *ā* of the stem has become *ō*, except in the nominative and accusative singular, in which it is *a*. So that the feminine declensions, with the exception

<sup>1</sup> Grimm, *Gram.*, i. p. 820.

<sup>2</sup> *Ibid.* i. p. 611-629.



*Strong.*

	Masc. 1.		Masc. 2.		Masc. 3.		Masc. 4.		Fem. 1.		Fem. 2.		Fem. 4.		Neut. 1.		Neut. 2.	
	sg.	pl.	sg.	pl.	sg.	pl.	sg.	pl.	sg.	pl.	sg.	pl.	sg.	pl.	sg.	pl.	sg.	pl.
Nom.	—	-ā	-ī	-ā	-u	-ī	—	-ī	-a	-ō	-ī	-ī	—	-ī	—	—	-ī	-ī(-yu, -u)
Gen.	-es	-ō	-es	-ō	-es	-eō	-es	-yō(eō)	-ō	-ōnō	-ī	-ōnō	-ī	-yō(eō)	-es	-ō	-es	-yō(eō)
Dat.	-a	-um	-a	-um	-yu	-im	-a	-im	-ō	-ōm	-ī	-im	-ī	-im	-a	-um	-e	-um
Accus.	—	-ā	-ī	-ā	-u	-ī	—	-ī	-a	-ō	-ī	-ī	—	-ī	—	—	-ī	-ī(-yu, -u)
Instr.	-ū		-ū				-ū								-ū		-yū	

of dative singular of first, differ from Gothic mainly in the prevalence of *i*. The genitive singular masculine and neuter is *-es*, as in Anglo-Saxon; though the *s* of the plural has been dropped both in the nominative and in the accusative. The genitive plural of first and second feminine belongs to the weak declension; and it is remarkable that this is confined to the feminine nouns, in which gender is expressed by the long final vowel of the stem. For in these the thought of the stem as feminine is strongest, and the speciality which this gives makes it less ready to be thought in correlation; and in the plural, which is less distinctly thought as object of a relation than the singular (14), they need the arthritic *n* in order to take up the sense of object to the strong genitive relation (144). In the third masculine *i* prevails more than in Gothic, having quite taken the place of *u* in the plural. The masculine and neuter nouns have stronger substance than the feminine nouns, and being consequently more readily thought as objects of a relation, they have an instrumental case in Old High German and Old Saxon ending in *-ū*, which corresponds to Sanskrit *-ā*.

It appears from the above that the fuller vocalisation of Old High German than of Gothic (137) was independent of the increased pressure of breath in uttering the consonants. For it is more probable that before this came to either Gothic or High German the latter had *ā* where it was the original vowel while Gothic had *ō* or *ē*, than that High German restored *ā* out of *ō* or *ē* when it got the second access of breath.

The loss of the final consonants everywhere except in the dative plural is remarkable. But some personal nouns of the first masculine retain in the accusative singular the old ending *-an*; <sup>1</sup> which corresponds with what has been observed of Sanskrit masculine nouns (14).

148. The following are the Old High German endings of the weak declension compared with the Gothic :

<sup>1</sup> Grimm, Gram., i. p. 613.

	Masculine 1st declension.				Masculine 2d declension.				Feminine 1st declension.			
	Gothic.		O. H. G.		Gothic.		O. H. G.		Gothic.		O. H. G.	
	sing.	pl.	sing.	pl.	sing.	pl.	sing.	pl.	sing.	pl.	sing.	pl.
Nom.	-a	-ans	-o	-un (-on)	-ya	-yans	-yo	-yun	-ō	-ōns	-a	-ūn
Gen.	-ins	-anē	-in	-ōnō	-yins	-yanē	-yen	-yōnō	-ōns	-ōnō	-ūn	-ōnō
Dat.	-in	-am	-in	-ōm	-yīn	-yam	-yēn	-yōm	-ōn	-ōm	-ūn	-ōm
Accus.	-an	-ans	-un (-on)	-un (-on)	-yan	-yans	-yun	-yun	-ōn	-ōns	-ūn	-ūn

  

	Feminine 2d declension.				Feminine 3d declension.				Neuter declension.			
	Gothic.		O. H. G.		Gothic.		O. H. G.		Gothic.		O. H. G.	
	sing.	pl.	sing.	pl.	sing.	pl.	sing.	pl.	sing.	pl.	sing.	pl.
Nom.	-yō	-yōns	-ya	-yūn	-ei	-eins	-in	-in	-ō	-ōna	-a	-ūn
Gen.	-yōns	-yōnō	-yān	-yōnō	-eins	-einō	-in	-inō	-ins	-ōnē	-in	-ōnō
Dat.	-yōn	-yōm	-yūn	-yōm	-ein	-eim	-in	-im ?	-in	-am (-nam)	-in	-ōm
Accus.	-yōn	-yōns	-yūn	-yūn	-ein	-eins	-in	-in	-ō	-ōna	-a	-ūn

Gothic *a* before *n* is *u* in Old High German, and Gothic *ō* before *n* is *ū*, except in genitive plural, where both are *ō* on account of the following *ō*. The dative plural masculine and neuter in Old High German has *ō*, perhaps from absorbing *n*. Gothic *a* of nominative singular is *o*, Gothic *ō* is *a* in Old High German. In Old Norse in the strong declension the nominative singular of masculines and the nominative plural of masculines and feminines retain *-r*, corresponding to Gothic *-s*; and in the weak declension the nominative plural of masculines and feminines ends in *-r*.<sup>1</sup>

149. The adjectives belong all to the first or second declension, except a few Gothic nominatives singular belonging to the third;<sup>2</sup> the stem, therefore, with these exceptions, ends either in *-a* or *-ya* (111). The following is the strong first declension of adjectives in Gothic:

	Singular.			Plural.		
	masc.	fem.	neut.	masc.	fem.	neut.
Nominative . . .	-s	-a	-ata	-ai	-ōs	-a
Genitive . . .	-is	-aižōs	-is	-aižē	-aižō	-aižē
Dative . . .	-amma	-ai	-amma	-aim	-aim	-aim
Accusative . . .	-ana	-a	-ata	-ans	-ōs	-a

To these endings *y* is prefixed in the second declension. The weak declension is the same as that of the substantive.<sup>3</sup>

The Anglo-Saxon strong first declension is:

	Singular.			Plural.		
	masc.	fem.	neut.	masc.	fem.	neut.
Nominative . . .	—	(-u)	—	-e	-e	-u
Genitive . . .	-es	-re	-es	-ra	-ra	-ra
Dative . . .	-um	-re	-um	-um	-um	-um
Accusative . . .	-ne	-e	—	-e	-e	-u

<sup>1</sup> Grimm, Gram., i. pp. 650-653.

<sup>2</sup> Ibid. i. p. 721.

<sup>3</sup> Ibid. i. pp. 718-722.

Short monosyllabic stems have *-u* in nominative singular feminine; long monosyllables have it not; the other stems vary.

In the second declension *e*, corresponding to *y*, is prefixed to these endings in the nominative singular of all genders and nominative plural neuter, perhaps also in nominative plural masculine, feminine. In the first declension both strong and weak *a* of the root, when closed to *ā*, according to 134, is restored by *e* of the flexion ending. The weak declension is the same as that of the substantive.<sup>1</sup>

The Old High German strong first declension is:

	Singular.			Plural.		
	masc.	fem.	neut.	masc.	fem.	neut.
Nominative . . .	-ēr	-u (-yu)	-ass	-ē	-ō	-u (-yu)
Genitive . . .	-es	-ērā	-es	-ērō	-ērō	-ērō
Dative . . .	-emu(o)	-ēru	-emu(o)	-ēm	-ēm	-ēm
Accusative . . .	-an	-a	-ass	-e (? -a)	-ō	-u (-yu)
Instrumental . .	-ū (184)	—	-ū	—	—	—

The second declension prefixes *y* to these endings. The weak declension is the same as that of the substantive.<sup>2</sup>

150. It is evident, on comparison of the strong declension of the adjective with the declension of the simple demonstrative pronoun, that the former has taken up the latter, dropping only the consonant which is the root of the pronoun, but retaining the pronominal elements, which are combined in the demonstrative with those of case and number. Moreover, the forms of the cases of the adjective in Anglo-Saxon and Old High German are deducible rather from the Gothic demonstrative or their own demonstrative than from the Gothic adjective. For the Gothic inflections of the adjective do not all agree with those of the demonstrative, but some of them rather with the inflections of the substantive. And this indicates that the pronominal declension of the adjective was a later development, and had not yet been fully carried out in Gothic.

The Gothic nominative of the masculine singular, and nominative, dative, and accusative of the feminine singular, and nominative and accusative of the neuter plural, are not pronominal, but identical with the substantive. Now the vowel of the feminine stem and the *s* of the masculine nominative singular express a stronger reference to the substantive object which is qualified than is contained in any other of the inflections of the substantive if used with the adjective. Even the feminine vowel is not strong enough for the reference to the substantive which is drawn forth by the act of combining the adjective with it, when it is laden with the genitive relation. In the neuter singular cases also, and in the oblique cases of the masculine singular as well as in all the plural except the nominative and accusative neuter, there is a similar insufficiency in the substantive inflections to express the reference to the substantive which is drawn forth in the act of combining the adjective with it. But the nominative and accusative plural neuter are lighter, being thought simply

<sup>1</sup> Grimm, *Gramm.*, i. p. 732-735.

<sup>2</sup> *Ibid.* i. p. 722-729.

as aggregates, and with them the adjective can combine without any special act of reference to them beyond what the substantive inflections involve. The special act of reference to the substantive, or of attention directed to it, is naturally expressed by pronominal elements. And the fact which this peculiar declension of the adjective reveals is, that in the Teutonic languages there is a renewed act of attention to the substantive object in thinking the adjective. While the nominal inflections were strongly thought, the sense which they involved of the substantive to which they belonged was sufficient for the expression of this reference to the substantive in the thought of the adjective. As the inflections came to be more weakly thought, they failed to signify this reference and were exchanged for the pronoun; and those failed first in which the sense of the substantive was weaker compared with the strength of the act of attention to the substantive which was involved in qualifying it in those cases with the adjective.

In Anglo-Saxon and Old High German the declension of the pronoun was taken up generally by the cases of the adjective, instead of being limited to a portion of them as in Gothic.

151. This tendency to direct a special act of attention to the substantive in thinking the adjective shows a weakness of comparative thought of substantive objects. For it is because the mind cannot with sufficient strength think the substantive object comparatively with other objects which it suggests, that it has to move back from them to it and renew its attention to it in making the comparison. Hence also the imperfect thought of the adjective which appears, especially in High German, in the use of the substantive for an adjective.

The uncomparative thought of the substantive which makes it unapt to be embraced in one idea with the adjective which qualifies it, causes also the adjective to lose in a great degree the sense of the substantive, when it is thought with special reference to only a part of the extension of the substantive. This happens always in the older Teutonic dialects when adjectives are thought as in a higher degree (225). For then the substantive object is thought comparatively, not with the generality of the objects denoted by the substantive, but with certain of them which have the quality. With these which have been thought first comparatively in ascribing the quality to them, another object is compared as having the quality in a higher degree. Such double comparison was not in old times readily performed by Teutonic habits of thought. It consequently engrossed the mental energy; and the general substantive was almost lost sight of in the double comparison. The substantive idea having been thus dropped, the adjective was thought not by comparison with a general, but as an apposition (Def. 5); so that it got somewhat of the nature of a substantive. But its attributive part was so strong, that its substance was weakly thought, and could not enter into the connections in which it stood without a special act of attention directed to it. The formation was the same for an adjective thus passing into a substantive as for a substantive which well-nigh passed into an adjective, on account of the special strength of the attributive part affecting the

substance (Def. 4) almost as if it qualified the latter<sup>1</sup> (144). In other words, the adjective, which expressed a quality as in a higher degree, was declined in the weak declension. But in the later dialects, as Middle and New High German, comparative thought had become easier from exercise, and the strong declension came to be admissible for the comparative degree.<sup>2</sup> In all the dialects the superlative degree might have the strong declension,<sup>2</sup> because in thinking it the second act of comparison is lighter, being with all the objects denoted by the substantive, and having the quality; for this differs little from the first act of comparison with the generality of objects denoted by the substantive.

Other adjective stems which attract thought from the general substantive idea, fixing it on particular substantive objects to which they refer, are those which express identity, as same, self, also the present participle (192), the ordinal numerals, and certain others, many of them compounds. And with these all, at least in Gothic, the substantive is replaced by a part of its extension with which the adjective becomes an apposition (Def. 5), and, losing the comparative thought of the substantive, is weak in its sense of substance, and needs the arthritic element to form its connections, so that they are declined with the weak declension. The Gothic present participle, however, in the masculine gender often becomes a substantive of strong declension, by virtue of its strong masculine substance (144), especially in the nominative singular; and this takes place also in High German and Anglo-Saxon, but not in Old Norse. In the later dialects, the compound and other adjectives last mentioned, originally of weak declension, have either died out, or become substantives.<sup>3</sup>

In contrast to these adjectives of the weak declension, are those which, on account of their strong objective reference to the substantive, have always a strong sense of its substance (Def. 4), and therefore the strong declension. These are, in Old Teutonic, the adjective pronoun, and the adjectives of measurement, namely, all, enough, half, middle, full, and the cardinal numbers.<sup>4</sup>

With regard to adjectives in general, the original rule was, the definite article brought with it the weak inflection of the attributive adjective; without the definite article, the adjective, attributive, or predicative had the strong form.<sup>5</sup> The article fixed attention on the limitation of the substantive by the adjective. The substantive in its own general meaning was weakened; and the only substantive object which was thought was that which had the attribute denoted by the adjective. This took the place in the adjective of its sense of the general substantive, and became in the adjective the substance of an apposition, weakened by the attributive nature of the idea, and consequently referred to arthritically in the weak declension. With the personal pronouns also the adjective was thought with an object limited to what possessed the quality; and a similar limitation of the substantive which was qualified by an adjective was effected by this and that, and later by possessive pronouns, by the indefinite article, by many, all, and each, so that after these the adjective was used in the weak form.<sup>6</sup>

<sup>1</sup> Grimm, *Gram.*, iv. p. 512.

<sup>2</sup> *Ibid.* i. p. 756; iii. p. 566.

<sup>3</sup> *Ibid.* iv. p. 519-524.

<sup>4</sup> *Ibid.* iv. p. 513-517.

<sup>5</sup> *Ibid.* iv. p. 581.

<sup>6</sup> *Ibid.* iv. p. 587.

152. In the formation of the comparative degree the original ending *īyans* or *īyas* is contracted to *īs* or *ās*, which in Gothic has become *iz* or *ōz*; and the feminine in Gothic and Old Norse, as in Sanskrit, takes *ī*, which in Gothic is *ei*. Perhaps in Gothic *-iz-* was taken by those adjectives with which as more simple the comparative element coalesced more easily. Derived and compound adjectives took *-ōz*. The superlative is formed by *-ist*.<sup>1</sup> The forms in Anglo-Saxon are, comparative *-r*, superlative *-est*, *-ost*; <sup>2</sup> in Old High German, comparative *-ir*, *-er*, *-ōr*, superlative *-ist*. Old High German forms the feminine comparative in *-ā*, to which the Anglo-Saxon, though not identical, corresponds.<sup>3</sup>

153. The first three cardinal numerals are declined as adjectives of three genders, the second and third being plural. Those for 4 and 9 are found declined in Gothic, those for 4, 7, and 9 in Anglo-Saxon, those from 4 to 9 in Old High German, all plural, both in the masculine and in the neuter; those for 10 to 19 in Gothic and Old High German, only that for 12 in Anglo-Saxon, are declined as plural substantives masculine; those for 20, 30, 40, and 50 are formed in Gothic with the masculine substantive *-tigus* (*decas*), which is regularly declined; the Gothic for 60 is wanting, but those for 70, 80, 90, 100, are formed with the neuter substantive *-tehund* (*decas*) and declined, the plural of 100 being abridged to *hunda*. In the other languages the multiples of 10 from 20 to 100 correspond to *-tig*, and are not declined except in Old Norse. The multiples of 100 correspond to *-hund*, and are not declined. Old Saxon has for 100 *hundered* or *hunderod*, Old Norse *hundraðh*, Middle High German *hundert*. Old Norse has also *-ræd* in the numerals for 07 to 120, *siræd* seventy, *ättræd* eighty, &c.<sup>4</sup> Gothic *θūsundli* is a feminine substantive singular, and is declined; so also Old Norse *θūsund*, which, however, afterwards became neuter; in High German and Anglo-Saxon it was neuter, and in the latter was declined.<sup>5</sup>

154. The personal pronouns are declined as follows:

#### GOOTHIC.

	1st Person.			2d Person.		
	singular.	dual.	plural.	singular.	dual.	plural.
Nom.	<i>ik</i>	<i>vit</i>	<i>veis</i>	<i>θu</i>	<i>gut?</i>	<i>γus</i>
Gen.	<i>meinā</i>	<i>unkara</i>	<i>unsara</i>	<i>θeina</i>	<i>inquara</i>	<i>izvara</i>
Dat.	<i>mis</i>	<i>unkis</i>	<i>unsis</i>	<i>θus</i>	<i>inquis</i>	<i>izvis</i>
Accus.	<i>mik</i>	<i>unkis</i>	<i>unsis</i>	<i>θuk</i>	<i>inquis</i>	<i>izvis</i>

Third person nominative singular and plural wanting; singular and plural genitive *seina*, dative *sis*, accusative *sik*; dual wanting.

#### ANGLO-SAXON.

	1st Person.			2d Person.		
	singular.	dual.	plural.	singular.	dual.	plural.
Nom.	<i>ik</i>	<i>vit</i>	<i>ve</i>	<i>θū</i>	<i>git</i>	<i>ge</i>
Gen.	<i>mīn</i>	<i>unker</i>	<i>user</i> ( <i>ūre</i> )	<i>θīn</i>	<i>inker</i>	<i>ēōver</i>
Dat.	<i>mē</i>	<i>unk</i>	<i>us</i>	<i>θē</i>	<i>īnk</i>	<i>ēōv</i>
Accus.	<i>mēk</i>	<i>unk</i>	<i>usik</i>	<i>θēk</i> ( <i>θē</i> )	<i>īnk</i>	<i>ēōvik</i>

<sup>1</sup> Grimm, Gram., iii. p. 566-568.

<sup>2</sup> Ibid. iii. p. 579.

<sup>3</sup> Ibid. i. p. 758; iii. pp. 566, 570, 571.

<sup>4</sup> Grimm, Gesch., p. 253.

<sup>5</sup> Grimm, Gram., i. p. 760-764.

Third person wanting. The accusatives *mek*, *usik*, *θek*, *eorik*; are only in the oldest sources; accusative is usually same as dative.<sup>1</sup>

## OLD HIGH GERMAN.

	1st Person.			2d Person.			3d Person.	
	sing.	dual.	plural.	sing.	dual.	plural.	sing.	plural.
Nom.	<i>ih</i>	<i>wiz</i>	<i>wir</i>	<i>dū</i>	<i>yziz, iz?</i>	<i>ir</i>		
Gen.	<i>mīn</i>	<i>unzar</i>	<i>unsar</i>	<i>din</i>	<i>inzar</i>	<i>ivar</i>	<i>sīn</i>	
Dat.	<i>mīr</i>	<i>unz</i>	<i>uns</i>	<i>dir</i>	<i>inz</i>	<i>iu</i>		
Accus.	<i>mih</i>	<i>unz</i>	<i>unsih</i>	<i>dih</i>	<i>inz</i>	<i>iwi</i>	<i>sih</i>	<i>sih</i>

The genitive dual and plural ends in *er* as well as in *ar*. The possessive pronouns are adjectives with the above genitives for their stem, and declined in the strong declension.<sup>2</sup>

The third personal pronoun of three genders and the simple demonstrative are as follows:

## GOTHIC.

	3d Personal Pronoun.					
	masc.	fem.	neut.	masc.	fem.	neut.
Nominative singular	<i>is</i>	<i>sī</i>	<i>ita</i>	pl. <i>eis</i>	<i>iyōs</i>	<i>iya</i>
Genitive . . . .	<i>is</i>	<i>izōs</i>	<i>is</i>	<i>izē</i>	<i>izō</i>	<i>izē</i>
Dative . . . . .	<i>imma</i>	<i>izai</i>	<i>imma</i>	<i>im</i>	<i>im</i>	<i>im</i>
Accusative . . . .	<i>ina</i>	<i>iya</i>	<i>ita</i>	<i>ins</i>	<i>iyōs</i>	<i>iya</i>

## Simple Demonstrative.

	masc.	fem.	neut.	pl.	masc.	fem.	neut.
	<i>sa</i>	<i>sō</i>	<i>θata</i>		<i>θai</i>	<i>θōs</i>	<i>θō</i>
Nominative singular							
Genitive . . . . .	<i>θis</i>	<i>θizōs</i>	<i>θis</i>		<i>θizē</i>	<i>θizō</i>	<i>θizē</i>
Dative . . . . .	<i>θamma</i>	<i>θizai</i>	<i>θamma</i>		<i>θaim</i>	<i>θaim</i>	<i>θaim</i>
Accusative . . . .	<i>θana</i>	<i>θō</i>	<i>θata</i>		<i>θans</i>	<i>θōs</i>	<i>θō</i> <sup>3</sup>

## ANGLO-SAXON.

	3d Personal Pronoun.				Simple Demonstrative.			
	masc.	fem.	neut.	masc. fem.	masc.	fem.	neut.	all gen.
Nom. sing.	<i>he</i>	<i>hēō</i>	<i>hit</i>	pl. <i>hi</i>	sing. <i>se</i>	<i>sēō</i>	<i>θāt</i>	pl. <i>θā</i>
Gen. . . .	<i>his</i>	<i>hire</i>	<i>his</i>	<i>hira</i>	<i>θās</i>	<i>θāre</i>	<i>θās</i>	<i>θāra</i>
Dat. . . .	<i>him</i>	<i>hire</i>	<i>him</i>	<i>him</i>	<i>θām</i>	<i>θāre</i>	<i>θām</i>	<i>θām</i>
Accus. . .	<i>hine</i>	<i>hi</i>	<i>hit</i>	<i>hi</i>	<i>θone</i>	<i>θā</i>	<i>θāt</i>	<i>θa</i> <sup>4</sup>
Instr. . .	...	...	...	...	<i>θū</i>	...	<i>θū</i>	...

## OLD HIGH GERMAN.

	3d Personal Pronoun.					
	masc.	fem.	neut.	masc.	fem.	neut.
Nominative singular	<i>ir</i>	<i>sīu</i>	<i>iss</i>	pl. <i>sīc</i>	<i>sīō</i>	<i>sīu</i>
Genitive . . . . .	( <i>es</i> )	<i>irū</i>	<i>es</i>	<i>irō</i>	<i>irō</i>	<i>irō</i>
Dative . . . . .	<i>imu</i>	<i>iru</i>	<i>imu</i>	<i>im</i>	<i>im</i>	<i>im</i>
Accusative . . . .	<i>inan (in)</i>	<i>sia</i>	<i>iss</i>	<i>sīc</i>	<i>sīō</i>	<i>sīu</i>

<sup>1</sup> Grimm, Gram., i. pp. 780, 781.<sup>2</sup> Ibid. i. p. 783.<sup>3</sup> Ibid. i. pp. 785, 790.<sup>4</sup> Rask, Anglo-Saxon Gram., pp. 53, 56.

	Simple Demonstrative.					
	masc.	fem.	neut.	masc.	fem.	neut.
Nominative singular	<i>der</i>	<i>diu</i>	<i>dass</i>	pl. <i>diē</i>	<i>diō</i>	<i>diu</i>
Genitive . . . .	<i>des</i>	<i>derū</i>	<i>des</i>	<i>derō</i>	<i>derō</i>	<i>derō</i>
Dative . . . .	<i>demu</i>	<i>deru</i>	<i>demu</i>	<i>dēm</i>	<i>dēm</i>	<i>dēm</i>
Accusative . . . .	<i>dēn</i>	<i>dia</i>	<i>dass</i>	<i>diē</i>	<i>diō</i>	<i>diu</i>
Instrumental . . .	<i>diū</i>	...	<i>diū</i>	...	...	...

The genitive masculine *es* is not found, *sīn* being used instead; for *irā*, *iru*, sometimes *irō* occurs. In the Old High German simple demonstrative all the cases whose endings begin with a vowel insert *i* after *d*. Often in nominative plural neuter *dei* is found for *diu*; *derū* and *deru* vary between *-ā*, *-u*, and *-o*.<sup>1</sup>

There are traces in Gothic of a demonstrative *hi*, declined like *i*.

There are also the demonstratives declined like adjectives; Gothic *þāins*, Old High German *genēr*, *desēr*, neuter *diz*; <sup>2</sup> Anglo-Saxon *his*, declined as follows: <sup>3</sup>

	masc.	fem.	neut.	all genders.
Nominative singular	<i>þēs</i>	<i>þeós</i>	<i>þis</i>	pl. <i>þās</i>
Genitive . . . .	<i>þises</i>	<i>þisse</i>	<i>þises</i>	<i>þissa</i>
Dative . . . . .	<i>þisum</i>	<i>þisse</i>	<i>þisum</i>	<i>þissum</i>
Accusative. . . .	<i>þisne</i>	<i>þās</i>	<i>þis</i>	<i>þās</i>
Instrumental . . .	<i>þeós</i>	...	<i>þeós</i>	...

The interrogative pronouns were :

Singular.			Plural.		
masc.	fem.	neut.	masc.	fem.	neut.
<i>hvas</i>	<i>hvo</i>	<i>hva</i>	<i>hvai</i>	<i>hvōs</i>	<i>hvō</i>
<i>hvis</i>	<i>hvizōs</i>	<i>hvis</i>	<i>hvizē</i>	<i>hvizō</i>	<i>hvizē</i>
<i>hvamma</i>	<i>hvizai</i>	<i>hvamma</i>	<i>hvaim</i>	<i>hvaim</i>	<i>hvaim</i>
<i>hvana</i>	<i>hvo</i>	<i>hva</i>	<i>hvans</i>	<i>hvōs</i>	<i>hvō</i> .

Anglo-Saxon *hva*, neuter *hwīt*, declined like *se*; Old High German *huer*, declined like *der*; Gothic *hwaryis*, which of many? declined like adjective second declension, is found again only in Old Norse; Gothic *hvaθar*, Anglo-Saxon *hwāθer*, Old High German *huedar*, which of two? declined regularly; Gothic *hwēleiks* qualis, Anglo-Saxon *hwilk*, Old High German *hwēlihēr*, New High German *welcher*.<sup>2</sup>

155. In the Gothic first personal pronoun the original *a* is reduced to *i* both in the root of the nominative singular and in that of the other singular cases. The genitive singular of the three personal pronouns takes an additional *i* to express the genitive relation, and subjoins *na*. This throws light on the Sanskrit genitive *mama*, *tava*, and the Zend *mana*, *tava*; for the Gothic *-na* seems to be arthritic (Def. 7) like the *n* of the weak declension (144), expressing attention directed to the person in the act of connecting it with what governs it (210); and Sanskrit *-ma*, *-va* probably expresses a second thought of the person in the act of connecting it with its correlative (8).

<sup>1</sup> Grimm, Gram., i. pp. 790, 791.

<sup>2</sup> Ibid. i. p. 794-800.

<sup>3</sup> Rask, Anglo-Saxon Gram., pp. 53, 56.



The dative singular, dual, and plural of the personal pronouns is expressed by *-s*, which has probably come from *ūya*. This element in the Sanskrit dative first person singular has become *hya*, and of the three spirants *h*, *s*, and *v*, *s* is the nearest to *y*, and *y* in coalescing with either of the others would naturally attract it to *s*; it would at the same time tend to make the preceding vowel *i*.

The accusative singular has *-k*. This has been explained by Bopp as equivalent to the Vedish particle *-hā*, *-gā*, which he identifies with *ha* in the Sanskrit first personal pronoun *aham*.<sup>1</sup> Thus understood it would express personality, and would correspond to a second thought of the personal object which would be involved in the mental act of connecting it with what governs it.

The root of the nominative dual and plural of first person is *vi* (Sanskrit *va*), of second person *yu*. The *-t* of dual, Bopp takes as a residue of *tva*, two.<sup>2</sup> These roots are too subjective for the other cases, and take an objective pronominal element *n*, to which probably *w* was subjoined for the dual and *s* for the plural; giving, with the genitive plural ending *-ra* (= Sanskrit *-sām*) *vinwara*, *vinsara*, *yunwara*, *yunsara*. The *n* followed by *w* may have been attracted by it so as to become *n̄*, and changed *w*, to *k* in *vinwara* (*vin̄kara*), to *qw* in *yunwara* (*yun̄qvara*) on account of the preceding *u*; and the *u* might also have caused *ns* to be followed by *v*, and consequently softened to *z* in *yunsara* (*yuzwara*). Subsequently *i* and *u* imparted their voice to *v* and *y*, and were dropped, so that *vi* became *u*, and *yu* became *i*. It is remarkable that the dual has the plural endings, the duality being confined to the stem.

The accusative plural *-s* was probably *-ks* originally, as Anglo-Saxon and Old High German have *-k*, *-h*. The Anglo-Saxon stem of second plural dropped the *z*, so that the genitive became *iunwara*, *ēōver* (134). In Old High German *yu* became *i*.

156. The feminine is expressed by *i*, in Gothic *si*, as it is also expressed by *-i* in Sanskrit and Greek in some adjectives and participles (5, 63).

This feminine *i* has become *y* in Gothic *iyōs* and *iya*, but in *iya* it is also neuter, for the reduction of energy expressed by the close vowel corresponds to neuter as to feminine. The Gothic neuter *ita* corresponds to Latin *it̄*. The final *a* in *ita*, *θata*, and in the accusative singular masculine and neuter of *is* and *sa*, must be a pronominal element referring to what the pronoun itself refers to. The pronominal genitive *-zōs* is Sanskrit *-syās*; *-zūi* is Sanskrit *-syai*, of which the *y* has changed *θa* to *θi*; *-mma* is Sanskrit *-sma(i)*; all pronominal; *zē*, *zō*, is Sanskrit *-sā(m)*, *zē* retaining a sense of the *y* after *s*, which in Sanskrit has imparted itself in masculine and neuter to the preceding vowel (13); this *y* has changed *θa* to *θi* throughout the Gothic genitive; *-m*, *-im*, dative plural, is Sanskrit *-b̄*, *-ib̄*.

Gothic *sō* corresponds to Sanskrit *sā*, *θō* accusative singular to Sanskrit *tā(m)*, *θō* neuter plural to Sanskrit *tā(ni)*; this *o* of *sō* is preserved in Anglo-Saxon *seō* feminine, and *heō* feminine. In Old High

<sup>1</sup> Vergl. Gram., ii. p. 102; Curtius, Gr. Etym., p. 515.

<sup>2</sup> Vergl. Gram., ii. p. 120.

German the *o* has become *u*, except in accusative singular feminine, where it is replaced by *a*; and in Anglo-Saxon accusative singular feminine *a* has been taken up by the stem *thū*, *thūs*.

The Teutonic construction of the relative pronoun is remarkable. It is either a demonstrative pronoun representing the antecedent in the relative clause, in the case proper to that clause, and with an indeclinable demonstrative element subjoined to it which has a relative significance. Or if the antecedent is a personal pronoun it is that personal pronoun repeated in the relative clause in the proper case and with the indeclinable element subjoined to it. In Gothic this element is *-ei*, which Grimm identifies with the stem of Latin *is*, but Bopp with the Sanskrit relative *ya*. In Old High German the indeclinable element is *dar*, *dir* (Old High German *dār* = there); in Old Norse it is *er*.<sup>1</sup> In Danish *der*, Frisian *ther*, which means where, is used by itself for the relative pronoun of all genders and both numbers.<sup>2</sup>

When the antecedent is a demonstrative pronoun it sometimes in Gothic takes the relative element, and is not repeated in the relative clause. And sometimes it is dropped as antecedent, and in the proper case in the relative clause takes the relative element.<sup>3</sup>

In the oldest High German the demonstrative is used by itself as relative; and the first and second personal pronouns when antecedent are repeated as relative.<sup>3</sup>

Gothic *-uh* = Latin *-que* or *-e*; Gothic *-hun* = Latin *-cun* or *-quam*.<sup>4</sup>

Old Norse has a negative suffix *-gi*, attached to particles, nouns, and pronouns, to express not, so, neither, nothing, &c.<sup>4</sup>

Old and Middle High German have an indefinite element *dih*-, *deh*-, *sih*-, as *deh ein* ullus, and an indefinite pronoun *eddes*, *ethes*.<sup>5</sup>

The Gothic *ei* is used for *ut*, *quod*, and also makes other particles relative, *svē* = *sva ei* so as, *þat ei* = *þat*.<sup>6</sup>

157. The Teutonic verb has only a present tense, and a past; but it has a subjunctive or ideal mood as well as an indicative, the past as well as the present being thought either indicatively or in the other mood.

In Gothic and Old High German, the Greek and Latin future is rendered by the present. It was long after that its expression by auxiliaries became general.<sup>7</sup>

In the original formation of the past, as it is seen in Gothic, there is either reduplication or change of the vowel of the root, or both. And the formations differ for past singular, past plural, and past participle. The vowel of the subjunctive past singular and plural is always the same as indicative past plural. The following table shows these vowel changes,<sup>8</sup> the diphthong of the reduplication syllable put first:

<sup>1</sup> Grimm, Gram., iii. p. 14-18; Bopp, Vergl. Gram., sect. 365.

<sup>2</sup> Grimm, Gram., iii. p. 174, note.

<sup>3</sup> Ibid. iii. pp. 23, 24, 33, 35.

<sup>4</sup> Ibid. iii. pp. 164, 165.

<sup>5</sup> Ibid. i. p. 1051.

<sup>6</sup> Ibid. iii. pp. 16, 17.

<sup>7</sup> Ibid. iii. pp. 40, 41, 57.

<sup>8</sup> Ibid. i. pp. 835, 837.

	Present.	Past singular.	Past plural.	Past participle.
I. . . .	<i>a</i>	<i>ai -a</i>	<i>ai -a</i>	<i>a</i>
II. . . .	<i>ai</i>	<i>ai -ai</i>	<i>ai -ai</i>	<i>ai</i>
III. . . .	<i>au</i>	<i>ai -au</i>	<i>ai -au</i>	<i>au</i>
IV. . . .	<i>ē</i>	<i>ai -ē</i>	<i>ai -ē</i>	<i>ē</i>
V. . . .	<i>ai</i>	<i>ai -ō</i>	<i>ai -ō</i>	<i>ai</i>
VI. . . .	<i>ē</i>	<i>ai -ō</i>	<i>ai -ō</i>	<i>ē</i>
VII. . . .	<i>a</i>	<i>ō</i>	<i>ō</i>	<i>a</i>
VIII. . . .	<i>ei</i>	<i>ai</i>	<i>i</i>	<i>i</i>
IX. . . .	<i>iu</i>	<i>au</i>	<i>u</i>	<i>u</i>
X. . . .	<i>i</i>	<i>a</i>	<i>ē</i>	<i>i</i>
XI. . . .	<i>i</i>	<i>a</i>	<i>ē</i>	<i>u</i>
XII. . . .	<i>i</i>	<i>a</i>	<i>u</i>	<i>u</i>

The vowel of the past participle seems to be the original radical vowel,<sup>1</sup> except in XI. and XII., in which the radical *i* has yielded to the influence of a liquid following it,<sup>2</sup> and become *u*; for the liquids have an affinity to *u*, being uttered, as *u* is, with a closure in the anterior part of the mouth, and unimpeded breath.

The reduplicating verbs all have a long radical vowel or diphthong, the *a* of I. being long by position, except in *fahan* and *hahan*, whose *a* is long by nature or position in all the other Teutonic languages.<sup>3</sup>

In VIII. to XII., *i* and *u* before *h* or *r* become *ai*, *ai*<sup>4</sup> (133). Otherwise the radical vowel is short in the last six conjugations. These express the past in the singular by broadening the radical vowel; for even in VII. Gothic *ō* corresponds to *ā* (133).

In all the conjugations there was perhaps a tendency to express the past by taking up the *a* of remotion as connected with the process of being or doing in the thought of the root (24, 27, 70, 86, 88), but there was not room in the first six conjugations to do this with sufficient expressiveness in the radical vowel on account of the long vowels or diphthongs of the root. It was therefore taken up in a reduplication syllable, but was still so associated with the process that it was lengthened to *ai*. In V. and VI. it also affected the radical vowels, changing them to *ō* = *ā*.

An increased sense of process in the present is expressed only in VIII. and IX. by an increase of the radical vowel.

In the plural of the past the process is less distinctly thought, because the subject, whose being or doing it is, is less distinct (24), and there is a tendency to think the past with loss of the process instead of with remotion, the being or doing as having ceased rather than as separated by an interval. This is expressed by reduction of the vowel of the present, and cannot be applied to the first six conjugations on account of the length of the radical vowel, nor to X. and XI. on account of the weakness of the vowel of the present. In the former, therefore, the plural of the past has the same stem as the singular, and in the latter it is expressed as remote, but diffused and lengthened by *ē* = *ā* (133). In VII. also the radical *a* has such an affinity for the *a* of remotion that it takes the latter in the plural as in the singular, *ō* in both corresponding to *ā* (133).

<sup>1</sup> Bopp, Vergl. Gram., sect. 26. 3.

<sup>3</sup> Ibid. i. p. 1023.

<sup>2</sup> Grimm, Gram., i. p. 839.

<sup>4</sup> Ibid. i. p. 843.

If the root begin with two consonants, only the first begins the reduplication syllable, except *sp*, *st*, *sk*, which have such unity that both are repeated.<sup>1</sup>

In the other Teutonic languages the reduplication of the initial consonants is given up, and the vowels of the reduplication syllables are taken into the roots. In other respects the vowels correspond to the Gothic, according to the rules which hold for each language.<sup>2</sup>

The consonants are least liable to inorganic change in the present, more in the past singular, most in the past plural.<sup>3</sup>

158. To the stem of the tense, formed as above, the following person endings are subjoined in Gothic :

Indic. Pres.				Indic. Past.			
	1	2	3		1	2	3
Singular	-a	-is	-iθ	Singular	—	-t	—
Dual .	-ōs	-ats	—	Dual .	-u (?)	-uts	—
Plural .	-am	-iθ	-and	Plural .	-um	-uθ	-un
Subj. Pres.				Subj. Past.			
	1	2	3		1	2	3
Singular	-au	-ais	-ai	Singular	-yau	-eis	-i
Dual .	-aira (?)	-aits	—	Dual .	-eiva	-eits	—
Plural .	-aima	-aiθ	-aina	Plural .	-eima	-eiθ	-eina
	1	2	3		1	2	3

Imperative singular, —, —, —; dual, —, -ats, —; plural, -am, -iθ, —; infinitive, -an; participle present, -ands; participle past, -ans.<sup>4</sup>

It appears from the above that there is in Gothic a remarkable development of the subjective engagement of the persons, for the vowels which precede the person elements belong to them rather than to the verbal stem, and express the realisation by the person; *a* expressing it as present, *u* as past, *ai* (Greek *oi*) as conditional, *ei* as conditional past, the closeness of the vowel reducing the expression of realisation. The persons which are more lightly thought have less need of this element, and tend to reduce or drop it, for they readily coalesce with the verb as subjectively realising it. These are the singular persons, and in a less degree the second plural, for this is lightened by the direct address of the second person, and by the indistinctness and consequent abstractness of the plural. The first person singular involves *a*, expressive of self-consciousness (17), and this tends to predominate over the more objective element *m*, and to take the place of the vowel of subjective engagement. In the dual first person *v* takes the place of *m* as in Sanskrit, *vas* in the present being vocalised to *ōs*. In the first singular subjunctive *m* is vocalised to *u*, while in the indicative past it is dropped.

The second singular has less life in the indicative past than in the other parts, for the sense of the past which takes life from the person is more distinct in the indicative than in the subjunctive; but it is remarkable that while in Sanskrit the second singular perfect is -t'a and in Latin -ti, it is -t in Gothic. Perhaps *θ* would not have been sufficiently contrasted with *s*, *d* would become *θ* at the end of a word. In the dual *ts* (Sans. *t'as*) the *t* of second person is probably

<sup>1</sup> Grimm, Gram., i. p. 843.    <sup>2</sup> Ibid. p. 837.    <sup>3</sup> Ibid. ii. p. 79.    <sup>4</sup> Ibid. i. p. 840.

due to the *s* which follows it. The second plural seems to be lighter, as has been said, than the first or third plural or the first dual, for it does not, like these, take *a*, representing the associated persons in the subjunctive, in which, owing to the weaker realisation, the person is less merged in the verb.

It is to be observed that, except in the second singular of the past and in the second dual, the old *t* of the person endings is in Gothic represented by *ɗ*, instead of by *θ* as it ought to be according to Grimm's law. Even in the third singular and second plural the *θ* is *ɗ* changed to *θ* at the end of the word according to the Gothic rule (138); for in High German it has become *t*.<sup>1</sup> Perhaps the old *t* in the decay of the formative elements was softened to *θ* before the first general change of the mutes took place (132), and then the *θ* became *ɗ*.

159. There is also what Grimm calls a weak conjugation of the Teutonic verb, a later formation than the strong conjugation above described. It subjoins to the root *i*, *ō*, or *ai*, in order to make of the root a verbal stem.<sup>2</sup> And these vowels must express that which makes the difference between the idea of a root and that of a verbal stem, namely, the process of being or doing which is involved in the idea of the verb (Def. 11), and the failure of which to penetrate the root (168) gives rise to the weak conjugation. The difference, then, between the weak and the strong verb is that in the former the thought of this succession is added to that of the radical element, but in the latter it is taken up into the radical element as part of the idea of it (III. 93; V. 48; VI. 25). The *i* conjugation is more transitive than the *o* conjugation.<sup>3</sup> The person elements and the vowels of tense and mood prefixed to them are the same in the weak verb and in the strong, but in the past tense of the former, both indicative and subjunctive, those vowels are preceded in Gothic by the element *dēɗ*, which thus intervenes between the process of realisation of the stem and the process of engagement of the subject. In the first and third singular, which are curtailed in the strong conjugation also and in the Sanskrit perfect, the whole ending is *da*; see Paradigm on the next page.

Imperative second singular *nas'ei*, *salbō*, *hab'ai*; the other persons same as indicative present.<sup>4</sup> Infinitive *nas'yan*, *salbōn*, *haban*; participle present *nas'yands*, *salbōnds*, *hab'ands*; participle past *nas'iθs*, *salbōθs*, *hab'aiθs*. If the root of the first conjugation be a long syllable, *-yi-* wherever it occurs becomes *-ei-*. The *ō* of the second conjugation swallows the vowels prefixed to the persons; the *ai* of the third is swallowed by them when they begin with *a*, but it swallows *i*. The *-t* of the second singular indicative past changes to *s* the final *ɗ* of *dēɗ*, and is dropped itself.

The element *dēɗ* is thought to be taken from a reduplication of a verb *dōn* to do (87, 191, 192, 215), which, however, is not found in Gothic or in Old Norse, though Gothic has its derived substantives *dēɗ* and *dēɗya*, and Old Norse has *dūð*; Anglo-Saxon has the verb *dōn* to do, and Old High German *tuon*.<sup>5</sup>

The infinitive *-an* corresponds to Greek *-ειν* (73), participle present

<sup>1</sup> Bopp, Vergl. Gram., sect. 91. 4.

<sup>2</sup> Grimm, Gram., i. p. 845.

<sup>3</sup> Ibid. ii. p. 586.

<sup>4</sup> Ibid. i. p. 845-850.

<sup>5</sup> Ibid. i. pp. 1041, 1042.

Paradigm of the weak Gothic Conjugations.<sup>1</sup>

INDIC. PRES.			INDIC. PAST.		
Singular.	1	2	1	2	3
	nas'y'a	nas'y'is	salb-ō	salb-ō's!	salb-ō-θ
	nas'y'os	nas'y'ats	-ōs?	-ōts	...
Dual	nas'y'am	nas'y'iθ	-ōm	-ōθ	-ōmθ
	nas'y'ida	nas'i-dē's	-ō-da	-ō-dē's	-ō-da
Plural	...	nas'i-dēd'uts	...	-ō-dēd'uts	...
	nas'i-dēd'um	nas'i-dēd'uθ	-ō-dēd'um	-ō-dēd'uθ	-ō-dēd'un
SUBJ. PRES.			SUBJ. PAST.		
Singular.	1	2	1	2	3
	nas'y'au	nas'y'ais	-ō	-ō's	-ō
	nas'y'ais	nas'y'ais	...	-ō'ts	...
Dual	nas'y'aima	nas'y'aiθ	-ō-ma?	-ō-θ	-ō-na?
	nas'y'aidēd'um	nas'y'aidēd'uθ	-ō-dēd'um	-ō-dēd'uθ	-ō-dēd'un
Plural	...	nas'i-dēd'uts	...	-ō-dēd'uts	...
	nas'i-dēd'um	nas'i-dēd'uθ	-ō-dēd'um	-ō-dēd'uθ	-ō-dēd'un
SUBJ. PRES.			SUBJ. PAST.		
Singular.	1	2	1	2	3
	nas'y'au	nas'y'ais	-ō	-ō's	-ō
	nas'y'ais	nas'y'ais	...	-ō'ts	...
Dual	nas'y'aima	nas'y'aiθ	-ō-ma?	-ō-θ	-ō-na?
	nas'y'aidēd'um	nas'y'aidēd'uθ	-ō-dēd'um	-ō-dēd'uθ	-ō-dēd'un
Plural	...	nas'i-dēd'uts	...	-ō-dēd'uts	...
	nas'i-dēd'um	nas'i-dēd'uθ	-ō-dēd'um	-ō-dēd'uθ	-ō-dēd'un

<sup>1</sup> Grimm, Gram., i. p. 845-850.

-*ant* to Sanskrit *ant* (see 158), participle past -*an* to Sanskrit -*āna*, -*θ* to Sanskrit -*ta* : *θ*, being a less continuous utterance than *n*, is less expressive of process, and is therefore suited to the weak verb.

There is a passive in Gothic which, however, is found only in the present indicative and present subjunctive, and is not in any other Teutonic language at all. The inflections have so far decayed that the first person singular and first and second plural have sunk to the abstract subjectivity of the third, and are replaced by it. The second singular is -*za* (-*σαι*), the third -*da* (-*ται*), the plural -*nda* (-*νται*). The subjunctive persons all end in *au* instead of *a*, which perhaps arises from their being less absorbed in the verb owing to the weakness of the realisation (158). To these endings the strong verbs, and the weak of the third conjugation, prefix *a* in the indicative, *ai* in the subjunctive; the weak of the first conjugation prefix *ya* indicative, *yai* subjunctive; the weak of the second *ō* throughout.<sup>1</sup>

160. The Anglo-Saxon verbal terminations are, for the strong conjugation :<sup>2</sup>

	1	2	3
Indicative present singular . . . .	- <i>e</i>	- <i>est</i>	- <i>eθ</i>
"          "      plural . . . .	- <i>aθ</i>	- <i>aθ</i>	- <i>aθ</i>
Indicative past singular . . . .	—	- <i>e</i>	—
"          "      plural . . . .	- <i>on</i>	- <i>on</i>	- <i>on</i>
Subjunctive present and past singular . .	- <i>e</i>	- <i>e</i>	- <i>e</i>
"          "          plural . .	- <i>en</i>	- <i>en</i>	- <i>en</i>

Imperative singular —, plural -*aθ*, infinitive -*an*, participle present -*ende*, participle past -*en*.

For the weak conjugation :<sup>3</sup>

	1	2	3
Indicative present singular . . . .	- <i>e</i>	- <i>st</i>	- <i>θ</i>
"          "      plural . . . .	- <i>aθ</i>	- <i>aθ</i>	- <i>aθ</i>
Indicative past singular . . . .	- <i>de</i>	- <i>dest</i>	- <i>de</i>
"          "      plural . . . .	- <i>don</i>	- <i>don</i>	- <i>don</i>
Subjunctive present singular . . . .		1, 2, 3	
"          "          plural . . . .		- <i>e</i>	
Subjunctive past singular . . . .		- <i>en</i>	
"          "          plural . . . .		- <i>de</i>	
"          "          plural . . . .		- <i>den</i>	

Imperative singular —, plural -*θ*, infinitive -*an*, participle present -*ende*, participle past -*d*. Here, as in the Gothic passive, is seen the tendency of the third person to supplant the first and second. The second and third singular indicative present strong often drops the *e*.

The -*st* of the second person is thought by Bopp to be a strengthening of *s* with the second personal pronoun, as the inflection got weaker.<sup>4</sup> It is in the past of the weak conjugation though not in that of the strong, perhaps because -*de* as an element mediating between the verbal stem and the person brought with it a stronger sense of the person.

In the first weak conjugation, verbs, whose root is a long syllable, drop the conjugational *i*.<sup>5</sup> The second conjugation is found only in

<sup>1</sup> Grimm, Gram., i. p. 855.

<sup>2</sup> Ibid. i. p. 895.

<sup>3</sup> Ibid. i. p. 903.

<sup>4</sup> Bopp, Vergl. Gram., sect. 448.

<sup>5</sup> Grimm, Gram., i. p. 904.

the past, and even in the past the *o* is sometimes replaced by *a* in the singular, or *ya* or *e* in the plural, the first and third conjugations being mixed with the second.<sup>1</sup>

161. The Old High German verbal terminations are, for the strong conjugation :

	1	2	3
Indicative present singular . . .	<i>-u</i>	<i>-is</i>	<i>-it</i>
„ „ plural . . .	<i>-amēs</i>	<i>-at</i>	<i>-ant</i>
Indicative past singular . . .	—	<i>-i</i>	—
„ „ plural . . .	<i>-umēs</i>	<i>-ut</i>	<i>-un</i>
Subjunctive present singular . . .	<i>-e</i>	<i>-ēs</i>	<i>-e</i>
„ „ plural . . .	<i>-ēmēs</i>	<i>-ēt</i>	<i>-ēn</i>
Subjunctive past singular . . .	<i>-i</i>	<i>-is</i>	<i>-i</i>
„ „ plural . . .	<i>-imēs</i>	<i>-it</i>	<i>-in</i>
Imperative singular . . .	—	—	—
„ plural . . .	—	<i>-at</i>	—

Infinitive *-an*, participle present *antēr*, participle past *anēr*.

The second singular indicative past is the stem of the subjunctive past.

In Old High German and Middle High German, *i* of the root becomes *e* in the plural of present indicative, and in the subjunctive and infinitive, probably because the radical idea was thought less distinctly in these parts, and the root uttered more carelessly.<sup>2</sup>

For the weak conjugation the terminations are :

	1	2	3
Indicative present singular . . .	<i>-u(-m)</i>	<i>-s</i>	<i>-t</i>
„ „ plural . . .	<i>-mēs</i>	<i>-t</i>	<i>-nt</i>
Indicative past singular . . .	<i>-ta</i>	<i>-tōs</i>	<i>-ta</i>
„ „ plural . . .	<i>-tumēs</i>	<i>-tut</i>	<i>-tun</i>
Subjunctive present singular . . .	<i>-e</i>	<i>-ēs</i>	<i>-e</i>
„ „ plural . . .	<i>-mēs</i>	<i>-t</i>	<i>-n</i>
Subjunctive past singular . . .	<i>-ti</i>	<i>-tīs</i>	<i>-ti</i>
„ „ plural . . .	<i>-tīmēs</i>	<i>-tīt</i>	<i>-tīn</i>
Imperative singular . . .	—	<i>-vowel</i>	—
„ plural . . .	—	<i>-at, -t</i>	—

Infinitive *-n*, participle present *-ntēr*, participle past *-tēr*.

The first weak conjugation subjoins to the root *i*, the second *ō*, the third *ē*; and the stem thus formed is second singular imperative. The first conjugation takes *-at* in second plural imperative, the others *-t*. The infinitive ending of the first conjugation is *-an*, the participle present ending *-anter*, *y* being prefixed; but verbs of the first conjugation, whose root is a long syllable, drop the conjugational *i* throughout, except in the imperative second singular, in which it is lengthened.<sup>3</sup>

The prefix *-ga* Gothic, *-ge* Anglo-Saxon, *-ka* *-ki* Old High German, gradually attached itself, except in Norse, to the participle past of most verbs, except when excluded by certain other particles. It corresponds to Latin *com*, and like it signifies totality or completion.<sup>4</sup>

162. There are anomalies in the conjugation of certain verbs in the

<sup>1</sup> Grimm, Gram. i. p. 906.

<sup>2</sup> Ibid. i. pp. 864, 1066.

<sup>3</sup> Ibid. i. pp. 856-879, 1021.

<sup>4</sup> Ibid. i. p. 1016, ii. p. 833.



Teutonic languages, some of which are similar to what are found in other Indo-European languages, and some peculiar to themselves. The verb substantive in Gothic has three roots—*is* for the indicative present singular, 1 *im*, 2 *is*, 3 *ist*; *si* for the indicative present dual and plural, and for the subjunctive present; *vis* to remain, for the past indicative and subjunctive.<sup>1</sup>

In Anglo-Saxon it has an additional root *bi*, whose present indicative and subjunctive is used with a future significance, and which also furnishes an imperative.<sup>2</sup>

In Old High German the root *is* appears only in the third singular indicative present, *si* in the third plural indicative present, and throughout the subjunctive present and in the infinitive; *pi* in the first and second singular and plural indicative present; *wis* in the past indicative and subjunctive, and also in the infinitive; the present of *wis* is used sometimes in a future sense.<sup>3</sup>

The various roots, when used in the sense of abstract being, take up into themselves a sense of tense and mood which is akin to the original signification of each, and which unfits them for expressing the other parts.

There are also several verbs used as auxiliaries expressing subjective conditions of the action or state denoted by the principal verb; and these have the anomaly that they are used for the present time in the past form of a strong conjugation, and for the past time in the past form of the weak conjugation with the stem of the strong past as its root.<sup>4</sup> The reason of this is probably that their sense as auxiliaries is too weak and abstract for their present form, and corresponds rather to the idea of them when reduced by being thought in the past. It was probably the loss of the past significance which made some of them irregular in the plural.<sup>5</sup> When this secondary auxiliary sense is itself past it takes the weak form, as new verbs are apt to do. The verb *will* tended to assume the subjunctive form, and to mix this with the indicative.<sup>6</sup>

Some verbal stems have the sense of process strong enough for the strong conjugation only in the present, and are weak in the past<sup>7</sup> (168). Others, though strong in the past, take up an additional element of process in the present, and are formed weak.<sup>8</sup>

163. Composition was favoured in Teutonic speech by the tendency to give synthesis to the sentence and mass it together as a whole. This also caused the Teutonic compounds to have less fusion of the components, one with another, than was the case with Greek and Latin compounds; for these got greater unity by being thought more separately each for itself, instead of the mind hastening to the conception of the whole. Hence in the Teutonic compounds each of the components had its own accent.<sup>9</sup> The first scarcely ever suffers unlaut (142) from an *i* of the second.<sup>10</sup> And many of the particles with which verbs were compounded could be quite separated from

<sup>1</sup> Grimm, Gram., i. p. 851.

<sup>2</sup> Ibid. i. p. 909.

<sup>3</sup> Ibid. i. p. 881.

<sup>4</sup> Ibid. i. pp. 851, 881, 909.

<sup>5</sup> Ibid. i. p. 852.

<sup>6</sup> Ibid. i. pp. 853, 884, 909.

<sup>7</sup> Ibid. i. pp. 854, 886, 910.

<sup>8</sup> Ibid. i. pp. 844, 863, 902.

<sup>9</sup> Ibid. ii. p. 407.

<sup>10</sup> Ibid. ii. p. 541.

them with great facility. In Gothic and Anglo-Saxon the particles were less separable than in High German.<sup>1</sup>

Grimm distinguishes proper and improper compounds; the former being those which were formed originally to express compound ideas, the latter those which have arisen from the coalition of words which occur frequently together in the same construction with each other. According to Grimm, the formal distinction is that the proper compounds were formed with a composition vowel subjoined to the first component; and the improper did not take a composition vowel.<sup>2</sup> When, however, the first component was a particle, it never had a composition vowel.<sup>3</sup> The composition vowel which was taken by the first component in every proper compound, unless it was a particle, was *a*<sup>4</sup> (206). And this *a* was evidently an arthritic element (Def. 7), expressing an abstract act of attention directed to the first component in carrying it into connection with the second. It limited the idea of the first by the connection in which it was to be thought, as that connection when formed limited the thought of the second. This composition vowel was liable to be swallowed by a final vowel of the first component, to be weakened, and at length to be dropped.<sup>5</sup> And in New High German, when its use was forgotten, a new element was adopted to connect a first component with a second, when the former expressed a strong idea, not readily compounded with another. This new composition element was *s*, which seems to have been taken from improper compounds in which the first component was a genitive, but in which the sense of it as a genitive had grown weak.<sup>6</sup>

The first component is subordinate as determinant of the second.<sup>7</sup>

The substantive as a rule cannot compound with the verb.<sup>8</sup>

164. The neuter gender is more favoured by the Teutonic languages than by Greek or Latin (220). Thus when an adjective or pronoun or participle agrees with two substantives singular, one of which is masculine and the other feminine, or one of which is masculine or feminine and the other neuter, or with three or more singular substantives of different gender, it is put in the neuter plural, sometimes in the neuter singular, the thought of them together being conceived as of several or of one, not involving living force. But if any of the substantives be plural, they cannot be all connected with the thought of the adjective, participle, or pronoun, and this will belong to only one of them, generally to the nearest.<sup>9</sup> Some personal nouns also which may belong to either sex are neuter, especially in Old Norse, and some which can be applied only to women. Thus Gothic *barn*, Anglo-Saxon *cild* (τέκος τέκνον), Old Norse *man*, *skall* poet, *fiſl* fool, *tröll* demon, *skass* giant, High German *wīp*, *weib*, Anglo-Saxon *vīf*, Old Norse *sprunđ* woman, *flíod* girl, Old Saxon *frī* woman, are all neuter.<sup>10</sup>

Neuter nouns which denote living objects are apt in Old High

<sup>1</sup> Grimm, Gram., ii. pp. 898, 902.

<sup>3</sup> Ibid. ii. pp. 410, 697.

<sup>5</sup> Ibid. ii. pp. 418, 419, 679.

<sup>7</sup> Ibid. ii. p. 407.

<sup>9</sup> Ibid. iv. p. 279-284.

<sup>2</sup> Ibid. ii. p. 403.

<sup>4</sup> Ibid. ii. pp. 411, 424, 624, 679.

<sup>6</sup> Ibid. ii. pp. 941, 942.

<sup>8</sup> Ibid. ii. p. 536.

<sup>10</sup> Ibid. iii. p. 323.

German to subjoin *ir* to the stem in the plural. This is compared by Grimm to the element of the comparative degree, and doubtless expresses the increase of plurality<sup>1</sup> (9), there being a sense of the many individuals because they are living.

The feminine nouns formed out of masculine and neuter nouns, like Gothic *tainyǫ*, basket, from *tains*, twig, and the others which Grimm mentions, denote things which are subordinate to their primitives, as made out of them, or as parts of them, or as pertaining to them, or dependent on them; and as expressing ideas in which the primitive has got a special application, they are weak<sup>2</sup> (144).

Grimm says: "The masculine seems the earlier, the greater, the firmer, the harder, the quicker, the active, the moving, the producing; the feminine, the later, the smaller, the softer, the stiller, the passive, the receptive; the neuter, what is produced or wrought, the stuff, the general, the undeveloped, the collective."<sup>3</sup>

Abstract substantives whose meaning involves a sense of being abstracted from another object, being thought as a quality or property, or condition, or being, or doing, are feminine, because thought as subordinate or dependent. Such are the Gothic verbal nouns in *-eins*, *-ōus*, *-ains*, which correspond to the Latin in *-tion*-, also those in *-ei*, *-iθa*, *-unga*.<sup>4</sup>

But those which are abstracted as a force without carrying with them a sense of belonging to another object are masculine. Such are the nouns whose stems are verbal roots,<sup>5</sup> and those which are formed with *-u*<sup>6</sup> (compare Latin *cantus* masc., *cantio* fem.)

Those which are quite abstracted,<sup>7</sup> so as not to carry with them a sense either of inherence or of force, are neuter.

It is probably on account of their marked objectivity that neuter nouns in Teutonic were originally formed with *-a*, for this expresses a strong sense of the substance (Def. 4).

The Swedish inflections distinguish the feminine from the masculine much less than the neuter from the masculine. The Danish unites masculine and feminine in one form, and strongly distinguishes the neuter.<sup>8</sup>

165. Originally in the Teutonic languages the negative preceded the verb, and in some cases, especially in Old Frisian and Anglo-Saxon, from frequent concurrence it got attached to the verb as a kind of prefix; but afterwards it came to be supplanted by a negative after the verb, which at first was used to strengthen the negation.<sup>9</sup> In the Old Norse poetry a negative suffix *-a*, originally *-at*, was attached to the verb.<sup>10</sup>

Was the above change due to the negative being excluded from before the verb by the closer connection between the subject and the verb, arising from the decay of the person element which represented the subject in connection with the verb? The subjectivity of the verb when strongly thought is a positive conception which in itself does not admit a negative.

<sup>1</sup> Grimm, Gram., iii. pp. 330, 646.

<sup>2</sup> Ibid. iii. p. 347.

<sup>3</sup> Ibid. iii. p. 359.

<sup>4</sup> Goth., iii. pp. 513, 530.

<sup>5</sup> Ibid. iii. p. 479-481.

<sup>6</sup> Ibid. iii. p. 507.

<sup>7</sup> Ibid. iii. p. 532.

<sup>8</sup> Ibid. iii. pp. 544, 548, 549.

<sup>9</sup> Ibid. iii. p. 709-714.

<sup>10</sup> Ibid. iii. p. 715.

166. The great use in the Teutonic languages of auxiliary verbs which express subjective conditions of the realisation of the principal verb evidences the strong subjectivity which characterises the thought of the Teutonic nations; and yet fine differences may perhaps be observed among the Teutonic languages in respect of the subjectivity of the verb.

The High German seems to have a stronger sense of the subject as the source or seat of the being or doing than Anglo-Saxon and English, but rather less sense than these of the subjective process, as if the volition which prompts an action were a more prominent element to the former, and the self-direction which carries it through were a more prominent element to the latter.

Thus on the one hand the High German conjugates more fully the auxiliary verbs denoting subjective conditions than Anglo-Saxon or English, so that in the former these approach to the rank of principal verbs. And in Old High German the person endings are much stronger and more distinct from each other than in Anglo-Saxon (160, 161).

On the other hand, the English construction of the verb to be, with the present participle, which does not exist in New High German, and which in Old High German had not the sense of continuance that it had in Anglo-Saxon, but scarcely differed from the simple tenses,<sup>1</sup> indicates in High German an inferior sense of the process or succession of the being or doing.

167. The passive voice even in Gothic is in a most decayed condition. And in Gothic the Greek passive infinitive is rendered by the active infinitive (230); thus, "to be seen of them," is rendered "for them to see;" the passive also is sometimes transferred to the auxiliary, as *uskiusan skulds ist*, "is bound for rejection," instead of "shall be rejected."<sup>2</sup>

In New High German the active infinitive is used after *hören* and *sehen* where Latin would use the passive, as *ich höre erzählen* *audio narrari*.<sup>2</sup>

And in Old High German and Anglo-Saxon a gerund in *-anne* (229) governed by *zu* took the place of a passive infinitive.<sup>3</sup>

In High German also the present participle active, even of transitive verbs, is used for a passive participle, the activity of which the substantives are the object distinguishing them adjectively<sup>4</sup> (229).

168. The Gothic intransitive verbs formed by *-na* approach to the nature of a middle voice. Their present is of the strong conjugation, their past of the weak; for in the present only they have sufficient sense of the subjective process for the strong formation (162). Both in the present and in the past their stem has the reduced vocalisation which belongs to the past plural of their root.<sup>5</sup>

It was perhaps owing to the strong subjectivity of Teutonic thought that it was not apt to think the subject as object, so that, except in Old Norse, the reflexive pronoun, which was complete in Gothic, was more or less given up.

<sup>1</sup> Grimm, *Gram.*, iv. p. 6.

<sup>2</sup> *Ibid.* iv. p. 57-61.

<sup>3</sup> *Ibid.* iv. p. 105.

<sup>4</sup> *Ibid.* iv. pp. 59, 60.

<sup>5</sup> *Ibid.* iv. p. 25-27.

Old Norse expressed the reflexive verb by subjoining an abbreviation of the reflexive object to the person ending; and this formation got a passive significance in Danish and Swedish.<sup>1</sup>

The Teutonic infinitive has less subjectivity than the Greek or Latin infinitive. It was thought more as an object or aim, and might be quite separate from the subjective realisation. Hence the construction of the accusative with the infinitive, as subject of the latter, has been lost by the Teutonic languages, though there are traces of it in the older Teutonic dialects (230). The infinitive had not enough subjectivity to retain it.<sup>2</sup>

The German *ich höre dich ein haus bauen*, does not mean *audio te domum extruere*, but, I hear you building a house.

169. The Latin perfect subjunctive is in Teutonic expressed by the present, generally indicative, sometimes subjunctive.<sup>3</sup>

Ulfilas translates all the Greek past tenses by the one Gothic past, without auxiliaries in the active, but by an auxiliary in the passive.<sup>4</sup> Perhaps in the eighth century, certainly in the ninth, the Old High German had traces of the past with auxiliaries; this was quite established in the tenth century. It may have been before this amongst the other Teutonic races, especially those which bordered on the Romance; for the Romance had the past with *habeo* in the sixth or seventh century as the rule.<sup>5</sup>

The Teutonic past participle, with *habe*, is an accusative, with *sein* a nominative; the former construction is proper for transitive verbs, the latter for intransitives. In the former it is in Anglo-Saxon frequently inflected.<sup>6</sup>

Old High German, Old Saxon, and Anglo-Saxon have no compound past for the verb to be. Middle High German and New High German make it with *bin*; Low German, Dutch, Frisian, Norse, and English make it with *habe*; the latter is the more objective.<sup>6</sup>

Ulfilas uses *vairþan*, Anglo-Saxon uses *bi*, for future of verb substantive.<sup>7</sup>

Ulfilas translates the Greek future twice by *haban* with the simple infinitive without a preposition, it being strongly contrasted with the present, "what I do I will do" (2 Cor. xi. 12), and "where I am there shall my servant be"<sup>8</sup> (John xii. 26).

Old High German uses *haben* with the infinitive to express the future, but prefixes *zi* (*zu*) to the infinitive, as does Middle High German, but sometimes the idea is more than a future; Gothic uses *munan* putare for *μέλλειν*, and *skulan* for *δεῖν*. In Old High German *seal* retains this significance; the poets use it for future, the present being preferred in prose. In Old Saxon and Anglo-Saxon it is more used for future, and more still in Middle High German, Middle Dutch, and Old Norse; Middle High German also using the present for future.<sup>9</sup>

<sup>1</sup> Grimm, Gram., iv. pp. 39-45, 321-331.

<sup>2</sup> Ibid. iv. p. 114-121.

<sup>3</sup> Ibid. iv. p. 147.

<sup>4</sup> Ibid. iv. p. 148.

<sup>5</sup> Ibid. iv. p. 149-155.

<sup>6</sup> Ibid. iv. p. 159-162; Rask, Anglo-Saxon Gram., sect. 401.

<sup>7</sup> Grimm, Gram., iv. pp. 177, 178.

<sup>8</sup> Ibid. iv. p. 93.

<sup>9</sup> Ibid. iv. p. 178-180.

In Gothic, *will* never expresses a mere future ; but it does in Old High German, and still more in Middle High German, confined, however, to first person singular.

New High German can say *er will kommen* veniet. In all the other dialects, including Anglo-Saxon, *will* retains its original meaning. In New High German alone, *werden* is introduced to express the simple future, *wollen* and *sollen* retaining a strong sense of their original meaning.<sup>1</sup>

170. Anglo-Saxon and Old Norse use the dual personal pronouns ; thus *vit Skilling*, for I and Skilling. Old Norse used the plural also in the same way, as *ver Hakon*, for we and Hakon ; *their Hreidhar*, for he and Hreidhar.<sup>2</sup> This shows a tendency to mass objects together as if there was a weak sense of the element of substance in the substantive idea (144) ; see Sect. III. 9, 4 ; 49. Skilling defines *vit* like an adjective or genitive.

171. The article is in use in all the Teutonic languages. But the Norse uses it differently from all the others ; for it suffixes the article to the substantive though it puts it before the adjective. The article which is thus used in Norse is declined as follows in the earliest writings :

	masc.	fem.	neut.		masc.	fem.	neut.
Nominative sing.	<i>inn</i>	<i>in</i>	<i>itt</i>	plural	<i>inir</i>	<i>inar</i>	<i>in</i>
Genitive	<i>ins</i>	<i>innar</i>	<i>ins</i>		<i>inna</i>	<i>inna</i>	<i>inna</i>
Dative	<i>inum</i>	<i>inni</i>	<i>inum</i>		<i>inum</i>	<i>inum</i>	<i>inum</i>
Accusative	<i>inn</i>	<i>ina</i>	<i>itt</i>		<i>ina</i>	<i>inar</i>	<i>in</i>

It is suffixed to the substantive, whether strong or weak, without interfering with the inflection of the substantive, except in the dative plural, whose ending melts into the article, becoming *unum* instead of *uminum*. The *i* of the article is absorbed by a final vowel of the substantive, and unless when followed by *nn*, is dropped after *ar*, *ir*, *ur*. In the neuter *itt* when suffixed drops one *t*.

The late origin of this formation is shown according to Grimm by its not affecting the radical vowel with any unmlaut (142).

In the Edda first appear a few traces of it ; and in Old Norse prose it is used much less frequently than in the New Northern dialects ; just as the article before the substantive is sparingly used in the early speech, though almost indispensable in the later.

In the Edda the article *sū*, *su*, *þat*, is often used before a substantive, but it is then a demonstrative rather than an article. In Swedish and Danish it is sometimes similarly used before a substantive, the demonstrative signification being very fine, so that the native grammarians call *sū* the defining article, *inn* the definite. In the old language the former is sometimes used before an adjective, but rarely without the latter intervening. In Swedish and Danish the use of the latter before an adjective has almost died out, the other having taken its place. The folk-songs often attach the suffixed article to the adjective, a construction which otherwise is unknown to the

<sup>1</sup> Grimm, Gram., iv. p. 180-182.

<sup>2</sup> Ibid. iv. pp. 294, 295.

Northern dialects, whether old or new.<sup>1</sup> The Norse languages show a tendency to suffixion (156, 168), which is probably due to Finnish influence (135, 138, 140, 142); for the northern languages of Europe and Asia all suffix the secondary elements to the primary.

In the Teutonic languages the nominative takes the article more than the other cases. And a genitive governed by a noun which has the article is apt itself also to have the article.<sup>2</sup>

Sometimes in Anglo-Saxon prose the possessive pronoun precedes article, adjective, and substantive.<sup>3</sup>

172. In Old and New High German prose, attributive adjectives and possessives as a rule precede the noun, but in Middle High German they sometimes follow, being then not inflected.<sup>4</sup> In Old Saxon and Anglo-Saxon there seems to be great liberty in putting them before or after, and in Middle Dutch; though New Dutch puts them before.<sup>5</sup> The Northern dialects, old and new, like the Gothic, put them before or after.<sup>6</sup>

In Anglo-Saxon the subject usually stands before the verb, even when preceded by those particles, &c., which in New High German and Danish require an inversion of this order; but after the particle *thū* or *thonne* then, at the beginning of a consequent sentence the subject usually follows the verb. The object usually precedes the verb, this being last, but there is much freedom of arrangement.<sup>7</sup>

In Anglo-Saxon, when a short pronoun is in the dative case, it is usually placed as near to the verb as possible, between the subject and the verb.<sup>8</sup>

173. The Teuton is in a marked degree slower in his mental action than the Celt, and less ready to respond to an impression; and a similar difference, though perhaps in a less degree, seems to distinguish him from the southern nations of Europe. In Teutonic speech accordingly a tendency may be observed to take in a larger object in the single act of thought than is usual in Latin, Greek, or Celtic. In Celtic a tendency has been remarked to reduce the root to a smaller fragment of thought than in other Indo-European languages (131); and in Teutonic is to be seen the opposite tendency to make the root a larger object of thought, and to include along with it in the one mental act additional elements which affect it. Thus the thought of the verb as past, and sometimes the thought of it as present, is in part taken up into the root in the strong conjugation (157), part of it being expressed outside the root in the vowel before the person. And though something like this is to be seen in Latin and Greek, the tendency is not by any means so strongly developed in them as in Teutonic and Sanskrit (45). Indeed, the Teutonic past tense of the strong conjugation is strikingly analogous to the Sanskrit reduplicated perfect. And the verb in both makes a distinct approach, though only an approach, to the internal modifications of the Syro-Arabian

<sup>1</sup> Grimm, Gram., iv. p. 373-380.

<sup>2</sup> Ibid. iv. p. 431.

<sup>3</sup> Ibid. iv. p. 500-504.

<sup>4</sup> Rask, Anglo-Saxon Gram., sects. 372, 373.

<sup>5</sup> Ibid. iv. pp. 436, 438.

<sup>6</sup> Ibid. iv. pp. 475, 496, 486.

<sup>7</sup> Ibid. iv. p. 505.

<sup>8</sup> Ibid. sect. 386.

verb (15), just as Teutonic and Hindoo thought seem to make some approach to that medium degree of quickness which characterises the genuine Syro-Arabian races (chap. i., Part I. 6).

The same tendency to give largeness to the individual acts of thought is to be seen in the heaviness of the elements which are put together in Teutonic speech, the constituent parts of a Teutonic word being thought more largely than those of Latin, Greek, or Celtic.

And the same character of Teutonic thought is to be seen in one of the most striking features of Teutonic language, the umlaut (142). The partial change in the radical vowel which Grimm calls by this name differs from the change of the radical vowel of the verb for the past or present in this respect, that it did not make its appearance till the formative elements of words had to a certain degree decayed, and the words had come to be thought with increased singleness of idea. Then the vowel of the root began to be affected by that of the subjoined formative element. And as the change was thus accompanied by a weakening of the latter, it was plainly due not to the root being overpowered by the formative element, but to the formative element being gradually taken up in thought by the root (142). It is an instance of the changes which affect language as human progress goes on (chap. iv. 24), but shows also the Teutonic largeness of the single act of thought, and the comparative tendency of the Teutonic mind to spread on its objects. Such a tendency is, by the theory of Book I., chap. i., connected with slowness of mental action, though the particular forms in which it will manifest itself is determined by other causes. And the correspondences which have been shown between fine varieties of this mental quality, and fine varieties of this feature in language within the same family, is a striking confirmation of the theory which connects the one with the other.

## LITHUANIAN.

174. The Lithuanian branch of the Indo-European family of languages comprises the Old Prussian, which was spoken along the coast on the south-east of the Baltic between the Vistula and the Niemen or Memel river, but which in the second half of the seventeenth century was absorbed by German; the Lettish, which is spoken south of the Gulf of Riga in Courland and Livonia; and the Lithuanian proper, which is spoken in the parts of Russia south and west of the latter dialect, and in the northern part of East Prussia, within a line extending from Labiau on the Kurische Haff eastward to Grodno, thence towards the north-east to the neighbourhood of Dunaburg, and thence westward to the sea near Liebau.<sup>1</sup>

It is the last-named dialect which has been investigated by Schleicher, and of which an account will be given here founded on his grammar. This dialect is itself divided into two sub-dialects—High or Southern Lithuanian, and Low or Northern, called also

<sup>1</sup> Schleicher, *Gram. der Litauischen Sprache*, sects. 2, 3.



Zemaitish, which means low. These two dialects in the Prussian part of the region are divided by the Memel river, and they occupy corresponding positions in the Russian part. The Prussian Lithuanians belong to the lowest stratum of the population, but in Russia the Lithuanian is the language also of a better class.<sup>1</sup>

175. The Low Lithuanian being the northern dialect, is more within reach of Finnish influence; the High Lithuanian is in contact with German. And the difference between the two dialects is probably due in part to these two influences. The Finnish loves vowels (IV. 147), and the vowels seem to be better distinguished in Low Lithuanian than in High. Thus *o*, *e* or *i*, *ao* in the former correspond respectively to *uo*, *eo*, *o* in the latter; in which it is to be observed that of the three original vowels, *a*, *i*, and *u*, *a* and *i* are better preserved in the former, *u* only is better preserved in the latter. In Low Lithuanian also, the second vowel in *ai*, *au*, *ei* is preserved, but in High Lithuanian it is generally dropped. The High German aspirates *t*, *d* with a sibilant, Finnish in its purity does not aspirate at all, and accordingly *t*, *d* are preserved in Low Lithuanian, but aspirated with a sibilant as *tʃ*, *dʃ* in High Lithuanian.<sup>2</sup>

But both the dialects betray Finnish influence, while they have of themselves a phonetic character of unversatile utterance akin to that of the Hyperborean languages, and a weak pressure of breath.

The Finnish has such a tendency to vowel utterance that when it adopts a foreign word it is apt to change the vowel of the word to a diphthong, which is often done by inserting *i* before the vowel. And it gives such full utterance to the vowels, that though a diphthong is uttered as such, with one vowel passing into the other in the first syllable, where probably the accent gives it unity, elsewhere the two vowels of a diphthong are uttered as fully as if they were not united (IV. 147). Now there is in Lithuanian a tendency to concurrent vowels, such as to lead to the increase of the single vowels with an additional element, which though extremely light is yet distinguishable from them, and which makes them long except *ea*, which may be short; such are *ao*, *uo*, *eo*. Long *e* almost always has a light addition, *ea* or *ee*, but sometimes becomes *eʃ*,<sup>3</sup> which being closer saves breath.

The diphthongs *ai*, *au*, *ei*, when accented in the beginning of a word, are uttered as *ai*, *au*, *ei*, the first vowel predominating over the second; but in the middle or end of a word, whether accented or not, both vowels are fully uttered, as they are always in *ui*; *ai*, *au*, *ei* in the beginning or the middle of a word are always accented; they do not occur in the end.<sup>4</sup>

Two vowels of different syllables may concur in composition.<sup>5</sup> The vowels *o* and *e* are always long;<sup>6</sup> *a* and *e* when unaccented are generally short; when accented and followed by two consonants they may be either short or long; when accented and followed by one consonant they are long as a rule.<sup>7</sup>

The weakness of the nasals and their tendency to be absorbed by a

<sup>1</sup> Schleicher, sects. 3, 4.

<sup>2</sup> Ibid. sects. 4, 7.

<sup>3</sup> Ibid. sect. 5, 3.

<sup>4</sup> Ibid. sect. 7. 1. 2. 3.

<sup>5</sup> Ibid. sect. 7. 3.

<sup>6</sup> Ibid. sect. 5. 4. 7.

<sup>7</sup> Ibid. sect. 8.

preceding vowel, which was native to Lithuanian as to Slavonic, and probably due to indolent utterance, fell in with the Finnish tendency to give predominance to the vowels. It continues where Finnish influence does not reach. For there is a tendency, more in later times than formerly, and in High Lithuanian than in Low, to drop a nasal at the end of a word, also before *s* or *z*, and sometimes before *t*.<sup>1</sup> This seems by its situation to have come from German influence. Perhaps it was due to the excessive lightness of *n*, *m* in Lithuanian, leading them to be disregarded by a German ear accustomed to strong utterance.

176. The tendency to insert *i* after a consonant before a vowel, which has been noted in Finnish, is in Lithuanian also<sup>2</sup> (140), which, moreover, tends to prefix *y* to a vowel in the beginning of a word or syllable.<sup>2</sup> This probably arises from weak pressure of breath from the chest, coupled with an effort to strengthen the vowels (Def. 26). That there is weak pressure of breath in the utterance of the consonants appears from the absence of the usual aspirates. And the use of *y* and not of *w* to help the utterance of the vowels is probably due to their natural weakness, in consequence of which they involve small guttural action. The use of *y* favours a tendency to a soft sibilation (178).

177. Lithuanian is also characterised by a relaxation of consonant utterance, probably due to Finnish influence, which produces a palatal tendency; as the tongue when relaxed naturally lies close to the arch of the palate.

There are no double consonants;<sup>3</sup> they are too intense for the habits of consonant utterance.

In consequence of the palatal tendency, there is in Lithuanian a complete series of palatals and ante-palatals, except that like Finnish it has no aspirates of any order except *t'*, and in High Lithuanian *t'* and *č'*, nor any spirants except *v*, *y*, and the sibilants.<sup>4</sup> And with this exception there are also the usual post-palatals and labials, besides *p*, *b*, *m*, *v*, and also *l*. This consonant *l* is in Slavonic also; and in the Tartar languages it is the *l* which belongs to words whose vowels are hard. It seems to have been developed by that distinction of hard or soft, and was probably got by Slavonic from Tartar languages.

178. There is another phonetic tendency in Lithuanian which has been alluded to above as resembling what is to be observed in the Turanian and Hyperborean languages generally of Asia and Europe, a deficient versatility of utterance which evades abrupt changes of action in the organs of speech, and slurs over the transitions of utterance in speaking.

Hence the dentals take up *i* or *y* following them, and become ante-palatal.

Hence *i* or *e* following *k* or *g* makes it palatal, following *l* or *r* makes it ante-palatal; *k* and *g* before *a*, *o*, *u*, or a consonant, are deep gutturals; but *k'*, *g'*, also may precede *a*, *o*, *u*, as *ki*, *gi*. When *l* follows a guttural or post-palatal it takes the post-palatal character, and

<sup>1</sup> Schleicher, sect. 26.

<sup>2</sup> Ibid. sect. 22.

<sup>3</sup> Ibid. sect. 14.

<sup>4</sup> Ibid. sects. 11, 12.

becomes *l̃*.<sup>1</sup> From the same cause also *e*, when followed by *k* or *l̃*, becomes *ea*, the light guttural vowel *a* facilitating the transition to *k* or *l̃*.<sup>2</sup> Hence also tenuis before medial becomes medial, and medial before tenuis becomes tenuis, the second consonant determining the nature of the first, probably on account of the strength which it has as beginning a syllable. Hence also *z* before *l* becomes *s* on account of the strength of the current breath in *l*; and *s* and *z* are dropped before another sibilant. But these rules are not observed in writing.<sup>3</sup> Hence also hiatus is avoided by crasis or elision, or the insertion of a semi-vowel,<sup>4</sup> and *i* in the beginning or middle of a word is sometimes pronounced *e*.<sup>5</sup>

Hence also a concurrence of *t* or *d* with *t*, *d*, *l*, or sometimes *k* after it, is eased by changing the first to *s*; *d* before *m* also may become *s*; and *s*, or if *k*, *g* precede, *s* is used as a medium of transition to *t*, *n*, or *m*, *s* to *k* or *g*, *z* to *d*.<sup>6</sup> (176).

179. After every short vowel the consonant sounds to a German ear as if it was double.<sup>7</sup> This is an interesting observation, for it throws light on the phonesis of Danish and the other Norse languages, which, like Lithuanian, show marks of Finnish influence (140). The apparent doubling of the consonant arises from the Finnish strength of vowel utterance, together with the little breath which the consonants involve; in consequence of these two peculiarities the consonant is felt strongly as an interruption to the breath, unless the interruption is weakened by the vowel being long. It stops the breath of the vowel without sending it through the closure, and is felt consequently as a more complete interruption.

In both the dialects of Lithuanian, but much more in the northern than in the southern, a tendency may be observed to shorten the final syllable.<sup>8</sup> This is what might be expected from the greater proximity of the former to the Hyperborean languages of Europe which show the same tendency (IV. 125). It would naturally arise from a weakness in the volition to carry expression through, which probably causes the weak pressure of breath from the chest (Def. 25). And in consequence of it short *i* and *u* at the end of a word are apt to be uttered carelessly like *e* and *o*.<sup>9</sup>

It is also probably due to the failure of expression at the end of a word that a medial there loses its sonancy and is pronounced tenuis though it is written medial.<sup>10</sup> And it is to be observed that Finnish also excludes the medial from the end of a word (IV. 147).

The accent in Low Lithuanian tends back to the stem<sup>11</sup> (IV. 154).

180. The Lithuanian roots are to a remarkable extent capable of expressing, by changes of the radical vowel, changes of the radical signification.<sup>12</sup> This is an approach to the internal vowel changes of Syro-Arabian words. But it is only an approach; for it is the expression only of modifications of the radical element; whereas the Syro-Arabian changes express modifications of the verbal or nominal

<sup>1</sup> Schleicher, sect. 10. 1. 2.

<sup>4</sup> Ibid. sect. 21.

<sup>7</sup> Ibid. sect. 14.

<sup>10</sup> Ibid. sect. 13. 2.

<sup>2</sup> Ibid. sect. 5. 3.

<sup>5</sup> Ibid. sect. 5. 6.

<sup>8</sup> Ibid. sects. 15, 27.

<sup>11</sup> Ibid. sect. 15.

<sup>3</sup> Ibid. sect. 13. 2.

<sup>6</sup> Ibid. sect. 23.

<sup>9</sup> Ibid. sect. 5. 6. 8.

<sup>12</sup> Ibid. sects. 17-20.

stem, including those of mood, tense, and voice in the former. The groups of Lithuanian roots through which runs a common element, along with a strengthening or weakening or other change of the vowel to determine the common element to the expression of a special radical idea, indicate a strong sense of the common element and of its modification in each root, which implies a largeness in the thought of the radical element (218). And this corresponds with the comparative slowness of thought in the northern races of the Indo-European family (Part I., Sect. VI.); so as strongly to confirm the theory laid down in Book I., chap. i.

Yet Lithuanian retains the characteristic structure of the Indo-European words; for every word in the language is formed with additions to the root unless where these have been lost by later curtailments.<sup>1</sup>

181. There is a full supply of Indo-European suffixes forming nominal stems, and a suffix is always attached to the root to form the stem of a noun.<sup>2</sup>

With the stem suffix *-a* there is generally a strengthening of the radical vowel, at least not a weakening of it.<sup>3</sup>

The suffix *-u* forms only masculines;<sup>4</sup> *-yu* also forms masculines, abstracts, or agents,<sup>5</sup> and *-tu* masculines;<sup>6</sup> *-ōka* forms adjectives = German *-lich*.<sup>7</sup>

182. Compound nominal stems all take the stem suffix *-ya* whatever be the original suffix of the second component, except the compounds with the negative *ne-*. The first member gives up its ending if it be *-a*, *-i*, or *-ia*, but *-u* is retained. Sometimes a composition vowel *-a-*, *-ō-*, *-i-*, is inserted between the two components and accented, but only in compounds of substantive with substantive. When a preposition is the first component, its vowel, if not long, is lengthened or strengthened, but *a* is long or short according as it has the accent or not.<sup>8</sup>

A verb already compounded with a preposition may sometimes compound with a second preposition. The meaning of the verb is in most cases essentially, often very strongly, modified by the preposition. Not rarely the verb is compounded with a preposition to change its process into completion. Especially often is *pa-* (Ger. *be-*) thus used, but also *nu-* (Ger. *herab*) and others. Of such verbs of completion as well as of others, a present is formed. The preposition *per-* through, takes the accent always. Disyllabic verbal forms of the verbs which join the infinitive ending immediately or with *ē* to the stem can throw the accent on the prefixed elements; the others never lose the accent by composition.<sup>9</sup>

When the radical vowel is long by nature or position in first singular present, the accent does not fall on the syllable preceding in composition (except *pér*), but if short it does. In preterite, which does not take *y*, the accent does not fall on component syllable (except *pér*),

<sup>1</sup> Schleicher, sect. 30.

<sup>4</sup> Ibid. sect. 43.

<sup>7</sup> Ibid. sect. 56.

<sup>2</sup> Ibid. sect. 41.

<sup>5</sup> Ibid. sect. 44.

<sup>8</sup> Ibid. sect. 57. 1.

<sup>3</sup> Ibid. sect. 41.

<sup>6</sup> Ibid. sect. 49.

<sup>9</sup> Ibid. sect. 57. 2.

but is apt to do so when the preterite takes *y*, and accents the ending in the uncompounded verb.<sup>1</sup>

The suffix *-ėanė* denotes the wife, *-aitis*, *-aitis*, *-ikas*, *-itis*, the son; *-itė*, *-ikė*, the daughter, of the person denoted by the noun.<sup>2</sup>

183. The names of countries are feminine, and generally those of cities.<sup>3</sup>

The cardinal numerals 1 to 9 are adjectives and have a masculine and a feminine form; those for 11 to 19 are all formed with *lika* (*ðiza*) subjoined to the cardinals with a composition vowel between, and have only one form; those for 10 to 90 are feminine nouns, but 10 and 20 are now indeclinable; that for 100 is masculine, that for 1000 feminine.<sup>4</sup>

Lithuanian distinguishes now only two genders, masculine and feminine.<sup>5</sup>

184. The table on next page shows the endings of the noun which are added to the root for stem, number, and case, and also the declension of the simple demonstrative.<sup>6</sup>

On comparing with Sanskrit (4) we observe that the old locative *i* has become *e* (179); *a* has become *u* in the dative singular of first and third declension, perhaps owing to a lost *m* = Sans. *ū*; in the instrumental singular *-u* has probably taken the place of *-ami*, and in the fifth and sixth declension it is formed with *-mi* = Sans. *ūi*; in the genitive singular *ō* seems to correspond to an original *ā*, having arisen in the first and third declensions from the decay of the inflection; *-aus* = Sans. *ōs*. The nominative plural first and third declension has *i* like Greek and Latin, and the accusative plural has *u* like Greek, owing to the dropped nasal.

In the second declension *ō* corresponds to an original *ā*. In the locative plural, old writings have sometimes *-sa*, sometimes *-se*, the oldest have for the most part *-su*,<sup>7</sup> which corresponds to Sanskrit. It seems probable that Lithuanian preserved the original ending of the locative plural *sva* (12), and that the *v* or *u* prevailed over the *a* till it was weakened in the first and third declension by being taken up by the stem ending, and that afterwards *a* was changed to *e* by the analogy of the singular. In the genitive plural *-u* = Sanskrit *-ām*,<sup>8</sup> the nasal causes the change to *u*, as in the cases already mentioned, and in the nominative vocative singular, seventh declension.

The neuter singular of *ta* has *i*, which is probably decayed *t*.<sup>9</sup> In the locative and dative singular masculine of *ta* the *m* is a remnant of *sma* (*tamui* is the old dative), but in the instrumental singular *mi* = *ūi*, and the preceding *a* is changed to *uo* by *m*. The two cases of the dual are compounded with the second numeral, the nominative dual feminine, like the nominative plural masculine, being *tėa* instead of *tai*.

The genitive plural is used for the genitive dual in nouns and pronouns.

In the greatest part of Lithuania south of the Memel river the dual

<sup>1</sup> Schleicher, sect. 57. 2.

<sup>2</sup> Ibid. sect. 59.

<sup>3</sup> Ibid. sect. 60.

<sup>4</sup> Ibid. sect. 62.

<sup>5</sup> Ibid. sect. 76.

<sup>6</sup> Ibid. sect. 78-89.

<sup>7</sup> Ibid. sect. 77, note.

<sup>8</sup> Ibid. sect. 77. <sup>9</sup> Bopp, Vergl. Gram., sect. 157.



has gone out of use, probably owing to German influence; and in Northern Lithuania the locative of all numbers is expressed by the preposition *in* and the accusative; so that there is no locative dual extant.<sup>1</sup>

In the cases left vacant in the table the stems in *-en* and *-er* subjoin *-i* or *-ya*, and form the cases accordingly (206). This addition to the stem is probably pronominal, referring to the substance (Def. 4), which wants an act of attention directed to it in those stems whose endings belong rather to the attributive part of the idea to connect them with those case relations which are more strongly thought<sup>2</sup> (144).

185. The interrogative or indefinite pronoun *kás*, which in certain applications is also relative, is declined like *tás*, except that it has no feminine or neuter form, and is used only in the singular. It has a compound possessive *kė̃a'nō'*, as well as the regular genitive *kō'*. Like *tas* are declined also *ans* (*anas*) that, *katras* which of two or three; also *ya*, third personal pronoun; *šya* this, *kurya* which, *tokya* talis, *kokya* qualis, except that in these the *y* occasions some euphonic changes and contractions.<sup>3</sup>

The substantive *pats* (*patis*) master, *pati* feminine, is used for self.<sup>4</sup> And there are pronominal compounds, as in Greek and the other kindred languages.

To the nominative singular masculine of the pronouns *-ai* is added for emphasis, as *tasai*, compare *ὅσοι*; and very frequent is the strengthening suffix *-gi* (*-γῆ*). There was formerly an interrogative suffix *-gu*, but it is no longer used (cf. Finnish *-ko*, IV. 152); *-yau*, which by itself means already, Latin *jam*, is subjoined as a particle of identity, as *tasyau*, *derselbe*. And to *ta*, *ana*, *šya*, *kurya*, *katra*, and to *ya* itself, *ya* may be subjoined, both pronouns being declined.<sup>5</sup>

186. The adjectives are declined pronominally, that is, by subjoining to the root in each case the same case of *tas*, if the stem ends in *-a*, of *-yas* if it end in *-u*, the former dropping *t*; except that those whose stem ends in *-u* make the nominative and accusative singular and nominative plural like substantives, *-u* maintaining itself by reason of its strength of significance. The instrumental singular has dropped *-mi* in the *-a* stems and generally in the *-u* stems, and the nominative plural of the *-a* stems ends in *-i* instead of *-ė̃a*; perhaps in both cases because the termination is weaker in the word of more than one syllable.<sup>6</sup>

In the nominative singular the adjectives form a neuter by dropping *-s*.<sup>7</sup>

The adjectives take a definite form by subjoining *ya*, both components being declined.<sup>8</sup>

The comparative of adjectives is formed by *-ė̃asn'is* masculine, *-ė̃asn'e* feminine, the superlative by *-yāusi'as* masculine, *-yāusi'a* feminine.<sup>9</sup> The former is declined as adjectives with stem ending *-ya*, the latter as adjectives with stem ending *-a*, in which the *y* makes some euphonic

<sup>1</sup> Schleicher, sect. 76.<sup>2</sup> Ibid. sect. 87.<sup>3</sup> Ibid. sects. 89, 90.<sup>4</sup> Ibid. sect. 91.<sup>5</sup> Ibid. sect. 92.<sup>6</sup> Ibid. sects. 93, 94.<sup>7</sup> Ibid. sect. 88.<sup>8</sup> Ibid. sect. 95.<sup>9</sup> Ibid. sect. 61.

changes in the inflections.<sup>1</sup> The root of the former corresponds to Sanskrit *-yans*, that of the latter to a partial reduplication of the same.

187. The personal pronouns are declined as follows:<sup>2</sup>

		First Person.	Second Person.	Reflexive.
SINGULAR.	Nominative	<i>āz</i>	<i>tū</i>	...
	Accusative	<i>mānē'</i>	<i>tāvē'</i>	<i>sāvē'</i>
	Locative	<i>manīyē, manī'</i>	<i>tavīyē, tavi'</i>	<i>savīyē, savi'</i>
	Dative	<i>mā'n mā'(manci Zem.)</i>	<i>tā'v</i>	<i>sā'v</i>
	Instrumental	<i>manimi, manim</i>	<i>tavimi, tavim</i>	<i>savimi, savim</i>
DUAL.	Genitive	<i>manēas, poss. mā'no</i>	<i>tavēas, poss. tā'vo</i>	<i>savēas, poss. sā'vo</i>
	(Nom. Accus.	<i>mādu (vedu old),</i>	<i>yādu, yādvī fem.</i>	...
		<i>mūdvī fem.</i>		...
PLURAL.	Genitive	<i>māma</i>	<i>yūma</i>	...
	Dat. Instr.	<i>māmdvėam, mām,</i>	<i>yāmdvėam, yām</i>	...
		<i>mūdvėam</i>	<i>yūdvėam</i>	...
PLURAL.	Nominative	<i>mēs</i>	<i>yūs</i>	...
	Accusative	<i>mūs</i>	<i>yūs</i>	...
	Locative	<i>mūsīyē, musī'</i>	<i>yūsīyē, yusi'</i>	...
	Dative	<i>mūms (māmus old)</i>	<i>yūms (yūmus old)</i>	...
	Instrumental	<i>mūmis</i>	<i>yūmis</i>	...
	Genitive	<i>mūsā (munsu Zem.)</i>	<i>yūsā (yunusu Zem.)</i>	...
		also <i>mūs</i>	also <i>yūs</i>	

The genitive *manēas*, &c., are never used possessively, but only *mano*, &c.; and the latter precede the governing substantive without an accent, unless with emphasis.

There is a possessive adjective *mans* meus, but little used; and there are definite possessive adjectives formed with *ya*, *manasis* der meinige, &c.

The oblique stem of the singular seems to be *mani*, *tavi*, *savi*, except in the possessive, whose stem is *mana*, *tava*, *sava*: all of them involving a second thought of the person in connecting with it the case relation (8, 155).

The stem of the dual seems to be *mu*, *yu*, and that of the oblique cases of the plural *mus*, *yus*, formerly *muns*, *yuns*, as appears from the old form of the genitive. This probably arises from the old element *sma* (7), the nasal being transposed and having changed *a* of *ma* to *u*. The ending of the locative plural is probably borrowed from the singular; in the dative and instrumental the *s* of the stem is dropped. The nominative plural *mes* seems to retain both the *i* and the *s* of the old ending *yas*.

188. The person endings are the same for all parts of the verb, subject only to changes of utterance, due to the elements which connect them with the root. And it is remarkable that not even in the oldest remains of the language are there any person endings for the third dual or third plural, the third singular being used for these.

The person endings are, singular, <sup>1</sup> *-mi*, <sup>2</sup> *-si*, <sup>3</sup> *-ti*; dual, <sup>1</sup> *-va*, <sup>2</sup> *-ta*; plural, <sup>1</sup> *-me*, <sup>2</sup> *-te* (19). But if there intervene between the person endings and

<sup>1</sup> Schleicher, sect. 93.

<sup>2</sup> Ibid. sect. 93.



the root *a* or an element ending in *a*, then they become *at*

the *a*, singular, <sup>1 2 3</sup> *-u*, *-i*, *-a*; dual, <sup>1 2</sup> *-ava*, *-ata*; plural, <sup>1 2</sup> *-ame*, *-ate*, *a* be absorbed in the first and second singular. If the accent is not on *u*, it is not on any of these endings; if it is on *u*, it is also on *i*, but on no other. In the ordinary speech *-a* of third singular and *-e* of the plural is dropped. In Low Lithuanian *-ava* has become *-au*. If these endings are preceded by *y*, the usual euphonic changes take place.<sup>1</sup>

The preterite and future take respectively *-aya-* and *-sya-* (26, 27, 70) between the stem and the person endings. In the former the first *a* is probably the essential element; *y* is dropped in first and second singular, and in the other persons *-aya* becomes *ō*; and in the latter, as well as in certain presents which have *-ya-*, *y* is dropped in the second singular, and in the other persons in High Lithuanian *-ya-* becomes *-i*, this *i* again being dropped in the third singular. The accentuation of the future is that of the infinitive.<sup>2</sup>

189. The Lithuanian verb, like the Sanskrit, has a present stem, and a non-present or second stem. From the latter the stem of the preterite also differs in many verbs; so that in dividing the verbs into classes it is necessary to take into account not only the present stem, but also the preterite stem. The classes may be briefly stated by noting the modification of the root either with an inserted letter or with V. for Vriddhi, G. for Guna, and ̄ or ˘ for lengthening or shortening the radical vowel, and by subjoining whatever letters are to be added before the first singular person ending *-u* for the present stem, *-au* for the preterite stem, and before the infinitive ending *-ti* for the second stem. Thus stated, the classes of primitive verbs are as follows:<sup>3</sup>

I. 1. *-u*, *-au*, *-ti*; *-u*, <sup>̄</sup>*au*, *-ti*; *-u*, *-yau*, *-ti*: *-u*, <sup>̄</sup>*yau*, *-ti*; *-u*, G. *yau*, *-ti*, the root in both these ends in *n* or *l*. 2. *-u*, *-eyau*, *-ēti* intransitives; *-u*, <sup>̄</sup>*ōyau*, *-ōti*.

II. 1. <sup>̄</sup>*u*, *-au*, *-ti*, radical vowel *i*, root ends in *l* or *r*, generally intransitive. 2. G. *u*, *-au*, *-ti*. 3. Ġ *u*, *-au*, *-ti*. 4. <sup>̄</sup>*u*, <sup>̄</sup>*au*, *-ti* radical vowel *a*.

III. 1. *-n-* <sup>̄</sup>*u*, <sup>̄</sup>*au*, <sup>̄</sup>*ti*, root ends in a consonant, intransitives, inchoatives. 2. *-n* *u*, *-au*, *-ti*.

IV. 1. *-y* *u*, *-au*, *-ti*; *-y* *u*, *-yau*, *-ti*; *-y* <sup>̄</sup>*u*, <sup>̄</sup>*yau*, <sup>̄</sup>*ti*, root ends in *r*, *l*, or *m*; <sup>̄</sup>*y* *u*, *-yau*, *-ti*. 2. *-y* *u*, *-eyau*, *-ēti*, intransitives.

V. 1. *-t* *u*, *-au*, *-ti*, inchoatives. 2. *-st* *u*, *-au*, *-ti* inchoatives. 3. *-d* *u*, *-au*, *-ti* inchoatives.

There are also remains of a conjugation in *-mi*, without any connective vowel, first singular preterite ending in *-au*, *-yau*; only two reduplicated, *dūomi* (*dūdmi*), *davīai*, *dūti*, give, *dēmi* (*dēdmi*), *dēyau*, *dēti* put<sup>4</sup> (215).

190. The following are the three stems of the various formations of derivative verbs, with the changes and additions affecting the roots

<sup>1</sup> Schleicher, sect. 101. 1. 2.

<sup>2</sup> Ibid. sects. 101. 3. 4; 105.

<sup>3</sup> Ibid. sects. 110-117.

<sup>4</sup> Ibid. sect. 119.

1. *-au, -o'ya'u, -o'ti*. 2. *-sa'ú, -sō'ya'u, -sō'ti*. In both these is a sense of duration, and if the root end in one consonant a radical *i* is generally lengthened. 3. *V. au, V. ya'u, V. i'ti*, durative, iterative, causative. 4. *-da'u, -d'au, -d'i'ti*, radical *a* reduced to *i*, causative. 5. *V. da'u, V. d'au, V. d'i'ti*, iterative of causative. 6. *V. sta'u, V. st'au, V. st'i'ti*, iterative. 7. *V. ō'yu, V. ō'ya'u, V. ō'ti* (sometimes without Vriddhi), iterative, durative, denominative; *ō* preceded by *y, n, ŋ, sn, d, t*, subjoined to the root, form iteratives, *ō* being accented. 8. *-ú'yu, -ar'áú, -ú'ti*, often not accented, borrowed words, denominatives, diminutives. 9. *-ú'yu, -ar'áú, -á'ti* often not accented, principally denominatives, some duratives and iteratives. 10. *-i'ýá, -i'ya'á, -i'ti*, often not accented, denominatives, almost all transitive. 11. *-ē'yu, -ē'ya'u, -ē'ti*, denominatives, intransitive, if *in* precede *e*, iterative, diminutive. 12. *-in'u, -in'áú, -in'ti*, often not accented, often with Vriddhi root, causative; *d* may precede *in*, after vowel, *n, k*, or *l*, if radical vowel be long, rarely after *t* or *d*. 14. *-en'á, -en'áú, -én'ti*, durative, intransitive.

It is not to be supposed that from every root all these derivatives can be formed. Yet many roots are capable of several derivatives. And there are besides the prepositional compounds.

191. Verbs whose stem has not more than two syllables (a component preposition not being counted), and which end in *-ú* or *-ýú* in first singular present, make a third singular permissive by prefixing *te* and ending in *éu*, which represents an original *ai* = Greek *ai*.

Verbs of three syllables, and those whose ending is not accented, only prefix *te*,<sup>2</sup> the last syllable being probably too weak for the inflection; *te* is probably of the nature of the conjunction that; it precedes a component preposition.<sup>2</sup>

The old optative formed with *-i-* subjoined to the present stem, corresponding to Sanskrit potential, was formerly used for an imperative, but afterwards the *i*, or, in second singular for a milder command, *ea*, was strengthened in the imperative by putting *k* before it, and was subjoined to the second stem.<sup>3</sup> This *k* Bopp deduces from the *s* of the stronger precativ element in Sanskrit *-sīyās*<sup>4</sup> (28).

The accentuation of the imperative is that of the infinitive.<sup>3</sup>

An imperfect is formed by *-dara-* subjoined to the stem of the infinitive; *dara-* is the stem of the past tense of a verb formed from *dā, dē, duo*, put, or do, according to 190, 8<sup>5</sup> (159).

An optative is formed by the optative of *bū*, be, which drops *ū* before the optative element *i, y*, with the accusative of the abstract substantive in *-tu*, formerly a supine, prefixed to it without change of accentuation. The first person singular always, and the second singular often, drops *-umb-*, so as, e.g., to make *suktiau* for *suktum-biau*; and the third person drops the verb *bū* altogether, and the *m* which precedes it, without nasalising the *u* which is then at the end.<sup>6</sup>

A middle is formed by subjoining to the verb, if not compounded with a particle, the reflexive element *s*, sometimes *si* or *se*. If the

<sup>1</sup> Schleicher, sects. 65-74.

<sup>2</sup> Ibid. sect. 104.

<sup>3</sup> Ibid. sect. 108.

<sup>4</sup> Bopp, Vergl. Gram., sect. 680.

<sup>5</sup> Schleicher, sect. 106.

<sup>6</sup> Ibid. sect. 107.

verb be compounded with a particle, *si* is inserted between the and the root, and sometimes in the written language *si* is also added at the end.<sup>1</sup>

The older language can also insert and subjoin in the same way the element of the first person *mi*, as object of a verb in any person.<sup>1</sup> The infinitive is formed by *-ti* added to the second stem. The supine, found only in old books, adds *-tu*. Both infinitive and supine were originally declined. When the infinitive ending *-ti* is attached immediately to the root it is not accented; when it is attached by *ĩ* or *õ* to a monosyllable the accent falls sometimes on *ĩ* or *õ*, sometimes on the root.

192. The present participle active adds to the present stem *-as* (*ants*) masculine, *-anti* feminine, *-a* (*ant*) neuter, the future *-ses* (*syants*), *-senti* (*syanti*), *-se* (*syant*), the gerund of both *-ant*, *-sent*; Zemaïtish and Old Lithuanian retain *n* before *s* in the present participle masculine.<sup>2</sup>

Verbs which in the present are disyllabic, and form the first singular in *-u*, *-iu* (infinitive *-ti* or *-ti*), have in the present active participle the accent almost always on the root, only those whose radical vowel is not long by nature or position, can, in certain cases, especially in nominative singular, accentuate the final syllable. The root is always accented when the present first singular is a disyllable in *-au* (infinitive *-õti* or *-ti*). Verbs having more than one syllable in first singular present accentuate the same syllable in participle as in present.

The past participle active is formed by substituting for *-au* in the first singular of the past tense *-eas* masculine, *-usi* feminine, *-ea* neuter; the original *-ans* being changed to *-eas* when it is the last syllable, to *-us* when it is not. In the same way a participle is formed from the imperfect in *-davau*. Preterites in *-yau* drop the *y* in the participle when it is dropped in the infinitive.<sup>3</sup> The accent is on the radical when the nominative singular masculine is a disyllable, a preposition not being counted, otherwise on the same syllable as in the infinitive. The ending of the past participle corresponds to Sanskrit *-vant* as that of the present and future to Sanskrit *-ant* (35); and in all the oblique cases of the masculine of these participles *ya* is added to the stem, and in all cases of the feminine except the nominative singular, *a* is added to the nominative singular, and then the participles are declined as adjectives ending in *a*.<sup>4</sup> These additions to the stem are probably pronominal, and are taken for the same reason that in Gothic the present participle has the weak declension (151), because in the thought of these participles there is less comparison of the substantive object to which they belong with the rest of the extension of the substantive than there is in the thought of an adjective. Their sense of the general substantive is less, and the substance weak.

There is a second present participle active, used only in the nominative, and formed by adding *-damas* masculine, *-dama* feminine, to the stem of the infinitive. This ending is the passive participle of

<sup>1</sup> Schleicher, sect. 109.

<sup>2</sup> Ibid. sect. 33.

<sup>3</sup> Ibid. sect. 34.

<sup>4</sup> Ibid. sect. 96.

whose original form was *dār*, and which signifies put, do<sup>1</sup> (159, 20). The formation seems to mean engaged in that which the root signifies. The accent is on the same syllable as in the infinitive,<sup>1</sup> but when the root is short and unaccented in first singular present, the accent is on the last syllable in feminine singular and masculine plural.

The passive participles present and future—the latter now no longer used—are formed by adding *-mas* masculine, *-ma* feminine and neuter, to the stems of the present and future respectively, retaining in the former the connective vowel which precedes the person in first and second dual and plural; but High Lithuanian drops the *a* of *syā*.<sup>2</sup> The accentuation of the feminine singular is as in the preceding.

The past passive participle is formed by adding *-tas* masculine, *-ta* feminine (35), to the stem of the infinitive.<sup>3</sup> The accentuation of feminine singular as in preceding.

The participle of necessity (Lat. *-ndus*) adds *-tinās* masculine, *-tina* feminine, to the same stem;<sup>4</sup> *-na* is the passive participial element (35), added to the element of the infinitive.

The participles in *-mas*, *-tas*, *-tinās*, are declined like adjectives in *-as*. And all the participles may take the definite form, subjoining to their cases the cases of *yas*, with the usual euphonic changes.<sup>5</sup>

The suffix *-tojis*, genitive *-tojo*, but in Zemaitish and the older language *-tojas*, feminine *-toje*, genitive *-tojes*, added to stem of infinitive, forms nouns of the agent;<sup>6</sup> *-imas*, or after vowels *-yimas*, added to the infinitive stem of very many verbs, forms nouns of the action.<sup>7</sup>

193. The attributive part of the substantive idea is weak, and does not come out as a common element in the names of crops, plants (except trees), and such collectives as rye, barley, flax, cabbage, which are plural, the singular denoting a single grain or plant; nor is it thought in the units of plurals denoting material and such like (221), or things consisting of many parts, as ladder, comb, village, recurrent festival, and quarter of the heavens, north, south, &c.

The dual of nouns and adjectives is used only in concord with the second numeral; it has gone out of use in Southern Lithuania, but in Northern it is to be heard entire, and not limited to natural couples, but applied to any two objects.

In songs and tales, but more rarely in ordinary discourse, *katras*, which of two or of three? and also *kas*, who? goes with a verb in the first or second dual, as *trīs berniūkai · e · i · s · i · n · ō · pì · ō · v · e · a · katrás bū ·*

*si · t · mī · no mē · elas*, three youths mowed hay, which of you will be my lover?<sup>8</sup>

Though *kas* and *katras* are each in the singular, yet their stem involves the thought of an alternative, and such is the sense of the individual that this makes the verb dual.

<sup>1</sup> Schleicher, sect. 35.<sup>2</sup> Ibid. sect. 36.<sup>3</sup> Ibid. sect. 37.<sup>4</sup> Ibid. sect. 38.<sup>5</sup> Ibid. sect. 96.<sup>6</sup> Ibid. sect. 39.<sup>7</sup> Ibid. sect. 40.<sup>8</sup> Ibid. sect. 120.

The second numeral is often suffixed to nouns in the nomin. dual.<sup>1</sup> The particles *pi*, meaning by, *na*, *n*, meaning in, and *lin*, meaning -wards, used to be suffixed to nouns. Some prepositions also may be used postpositionally.<sup>2</sup>

194. The neuter gender having been given up in the noun does not occur in the attributive adjective. But in the predicative adjective it is found when the subject is *tai* that, *kás* what, *viskas* all, or *nė́oks* nought, less frequently with the abstract subject, *it*. Disyllabic adjectives in *-as* become in this case adverbs in *-ai*, probably because they take up a stronger sense of the copula than those which are less simple. In ordinary discourse the feminine is often used for the neuter.

An adjective is masculine when it belongs to nouns masculine and feminine connected by the copulative conjunction<sup>3</sup> (220).

195. The only article which Lithuanian has, is that which is suffixed to the adjective (186), except that in some parts of the country, owing to German influence, *tás* is used as a definite article, *vė́ans*, one, as an indefinite. The article suffixed to the adjective particularises through the adjective, so that it is not a particular noun that is qualified, but the noun becomes particular by being qualified, and there is therefore an emphasis on the thought of the adjective. Adjectives used substantively, and not as neuter abstracts, take the suffixed article.<sup>4</sup>

196. The subject precedes the verb or predicate, the verb substantive being omitted with a predicative adjective.<sup>5</sup>

In such expressions as, they say, it rains, no subject is expressed.<sup>5</sup> The attributive adjective precedes its substantive, sometimes with a genitive between. The active participles follow their substantive in books, but precede in popular language.<sup>6</sup> The genitive may either precede or follow its governor.<sup>7</sup> The possessive case of the personal pronouns usually precedes its governor, and has then almost no accent; in the older language it often follows, and in the songs more frequently, being then accented. Some prepositions are used also as postpositions, e.g., *dėl* because of, *pi* by, *na* in, *link* -wards, are enclitic.<sup>8</sup> There is considerable freedom of arrangement of the parts of a sentence.

197. The reflexive pronoun, which has only the singular form, is used not only with the third singular and plural subject, but also with the first and second singular, dual, and plural.<sup>9</sup>

In the reflexive form of the verb, the reflexive element may be either direct or indirect object. In the former case the verb sometimes comes very near to a passive signification, and, especially in the older language, takes the place of a passive.<sup>10</sup>

The reflexive verb does not form the compound tenses with the verb to be, probably because its own signification is nearly a state of being, and the auxiliary verb would be tautology. But when it is compounded with a preposition, the reflexive element, which is put between the

<sup>1</sup> Schleicher, sect. 120. 2.<sup>2</sup> Ibid. sect. 133.<sup>3</sup> Ibid. sect. 121.<sup>4</sup> Ibid. sects. 122, 123.<sup>5</sup> Ibid. sect. 124.<sup>6</sup> Ibid. sect. 123.<sup>7</sup> Ibid. sect. 129. 1.<sup>8</sup> Ibid. sects. 133, 135. 2.<sup>9</sup> Ibid. sect. 135. 3.<sup>10</sup> Ibid. sect. 137.

sition and the verb, may be taken as governed by the preposition, and the verb as active, and then the compound tenses may be formed.<sup>1</sup>

The passive is generally expressed by a passive participle and the verb to be, the participle agreeing with the subject in number and gender.

198. The present tense involves a strong sense of process or duration, and is very much used, because facts are thought so much in their process. This duration is more strongly expressed by prefixing *be-*; with this prefix and the negative the meaning may be nevermore.<sup>2</sup>

The past tense is often used where we would use the present; because Lithuanian present has too much of the going on.

The past tense has the signification of the Greek aorist, perfect, and imperfect. But the written language often expresses the perfect by the past participle and the present of the verb to be. In Northern Lithuania this latter has almost taken the place of the past tense.<sup>3</sup>

By the verb to be and a participle are expressed also the pluperfect, the past optative, and the future perfect.<sup>1</sup>

The future has such a sense of process as to express a future duration as well as a future occurrence.

There is such a strong sense of process, along with a rather weak sense of position in time, that in the succession of one being or doing to another, the process of the consequent is sometimes thought as in a continuation of that of the antecedent, occupying a subsequent part of the same succession of time, its time being thought, not in relation to the time of the speaker as a past or present, subsequent to another past or present, but in relation to the time of the preceding realisation as a future<sup>4</sup> (V. 65).

The verb has little subjectivity, and its process is process of accomplishment. The future is consequently sometimes almost a future perfect.<sup>4</sup>

199. The optative mood would be better called the ideal, for it expresses what may be, what is doubtful, or what is only said or thought, as well as a wish.<sup>5</sup>

An instrumental case of the infinitive is used before the same verb from which it is formed to strengthen the expression; and these constructions are negatived doubly by *nei* before the infinitive, and *ne-*  
*burn*

before the verb. *Degtė dė'g'a*, with burning it burned, *i.e.*, it burned bright<sup>6</sup> (V. 66). There is also an intensifying construction of a noun or superlative governing its own or a kindred genitive plural.<sup>6</sup>

The supine was formerly used with verbs of motion, but now the infinitive.<sup>6</sup>

The participle in *-damas* is used only in the nominative.<sup>7</sup>

The participles and gerunds are used in preference to relative and dependent clauses; showing a weakness of subjectivity in the verb. The participle agrees with its subject, the gerund, which is a participial

<sup>1</sup> Schleicher, sect. 136.

<sup>2</sup> Ibid. sect. 138. 1.

<sup>3</sup> Ibid. sect. 138. 2.

<sup>4</sup> Ibid. sect. 138. 3.

<sup>5</sup> Ibid. sect. 139.

<sup>6</sup> Ibid. sects. 129. 4, 140. 4.

<sup>7</sup> Ibid. sect. 141.

stem without case element, takes its subject in the dative, and states a condition of the fact.<sup>1</sup>

In negation the verb takes the negative *ne*-, and at the same time another member of the sentence may take it also.<sup>2</sup>

200. Examples: (1.) *Yis ėjo ė tã męstã pas tã karaliũ*, he went into the city to the king; <sup>he went into the city to king</sup> *ėjo* is third singular of preterite of *eiti*, to go (188); the nasalised endings are accusatives; on the

article see 195. (2.) *Az baisũ sãpmã sapnarau*, I dreamed a frightful dream; <sup>I frightful dream dreamed</sup> *sapnarau* is the first singular preterite of *sapnuoti*, to dream.

(3.) *Yis mokina manẽ rastã*, he teaches me writing; <sup>he teaches me writing</sup> *mokina* is third singular present of the causative verb *mokinti*, I teach<sup>3</sup> (190, 12). (4.)

*Duk mums naujẽ metã sveikoms sulaukti*, grant us to continue healthy during the new year; <sup>grant us new year healthy to continue</sup> *duk* for *duki* is precativ (191) of *duoti* to give; *mums* is dative plural of first personal pronoun; *naujẽ metã* accusative for time how long; *sveikoms* dative plural of *sveikas* healthy; *sulaukti* infinitive of *sulauk*, compound of *su* with, and

<sup>he will bring beautiful little words and bitter little tears</sup> *laukti* to wait. (5.) *Parnes graziũ zodatũ ir gailiũ asaratũ*, he will bring beautiful little words and bitter little tears; <sup>he will bring beautiful little words and bitter little tears</sup> *parnes* is third singular future, which is reduced to the verbal stem, compounded of *par* = Latin *per*, and *nes* bring; *graziũ* is accusative plural of *grazus*, feminine *grazi*, *gailiũ* of *gailu* (186); *zodatũ* is genitive plural of *zodatis*, diminutive of *zodis*, *asaratũ* of *asaratis*, the diminutive of *asara*, both formed with *-atis*, and declined as stems

ending in *-ya*. (6.) *Ant tãvo pa·galb·os nus·tikiẽdam·s darbã*

<sup>I began</sup> *pradẽyan*, relying on thy help I began the work; <sup>I began</sup> *pa-* is a perfective prefix (182); *nu-* down is perfective; *-si-* is reflexive (191); for participle *-damas* see 192; *pradẽyan* first singular preterite (190)

of *pradẽti*, *pra* forth, *de* put. (7.) *Tuĩ be pus·auksin·io ne·par*

<sup>it without half gulden gen. not sell</sup> *duo·si·n*, I will not sell it under a half gulden; <sup>it without half gulden gen. not sell</sup> *auksinas* is a gulden, derived from *auksas* gold, and when compounded with *pus* it takes *ya* for stem ending; *parduoti*, to sell, is compounded of *par*

<sup>he such the shame himself did</sup> through, and *duo* give. (8.) *Yis tok·s tã gẽdã pasidurẽ*, one such as he has done himself the shame; <sup>he such the shame himself did</sup> *pa* is a perfective prefix (182); *pasidurẽ* is third singular preterite of *pasiduri* sich machen, perfective

<sup>what through winter was sleep past part. out crept</sup> and reflexive. (9.) *Kas per žemã buro mego·y·ės iš·lindẽ*, what had slept through the winter crept out; <sup>what through winter was sleep past part. out crept</sup> *žemã* is the accusative singular; *buro* is third singular preterite of *bu* to be. (10.)

<sup>Mass hold ger. he sleep pret. 3d sing.</sup> *Misẽ bẽtaikant yis mego·y·o*, while they held Mass he slept;

<sup>1</sup> Schleicher, sects. 142-144.

<sup>2</sup> Ibid. sect. 146. 3.

<sup>3</sup> Ibid. sect. 122.

<sup>4</sup> Ibid. sect. 125.

<sup>5</sup> Ibid. sect. 127.

<sup>6</sup> Ibid. sect. 129.

<sup>7</sup> Ibid. sect. 132. 2.

<sup>8</sup> Ibid. sect. 135. 6.

<sup>9</sup> Ibid. sects. 136, 144.

*belai kant gerund*, *be* expresses duration.<sup>1</sup> (11.) *Kad is · ei · s meta · i* when out go fut. year pl. and one fem. day then you become blind fut. 2d pl.

*ir vėana dėna tai yus ap · yek · si · t*, when a year and a day shall pass then ye shall become blind;<sup>2</sup> *metai* is plural because thought in its parts (193); *tai* is the neuter demonstrative; *yek* is

the root, to which *ap* gives sense of becoming. (12.) *Kur as* why I sing *daina* fut. 1st sing. why merry fem. be fut. 1st sing.

*dainuo · si · u kur linksma bursi · u*, why should I sing *dainas* he in go fut. into room accus.

(folksong), why should I be merry?<sup>2</sup> (13.) *Yis i · ei · s i stubā* and robber dat. pl. he give fut. knowledge when all pl. sleep past part. pl.

*o razbaininka · ms yis duo · s zinē kad visi su · mig · ē* be fut. room gen. then they bottom accus. pl. out knock opt. 3d pers. out of

*bu · s stub · o tai yėa dugn · us is · mus · tu is* the gen. pl. vessels and all accus. off take opt. and off go away part. nom. pl.

*tu bosu ir vishū is · ples · tu ir is · keliau · dam · i* moreover also the maiden along with take opt.

*dar ir tū mergā drange im · tu*, he should enter into the room and give instruction to the robbers, when all should be asleep in the room; then they should knock the bottoms out of the vessels, and carry off everything; and going away they should, moreover, also bring the maiden along with them; *sumig* compounded of *su* with, and *mig* sleep; for optative third person see 191.<sup>3</sup>

## SLAVONIC.

201. The Slavonic race, called Sarmatians by the Greeks and Romans, dwelt in early times north of the Black Sea and of the mouths of the Danube, where in the last half of the fourth century they were conquered by the Goths under Ermanric. Both were soon after overwhelmed by Tartar and Mongolian invaders, and the Slaves spread themselves west and north till they reached the Saal and Holstein, and south of the Danube into Illyricum.

The Slavonic language includes many dialects, and these have been grouped into an eastern and a western division, called respectively Antian and Slavinian.<sup>4</sup>

The most eastern Slaves formed two states—a southern state about Kiev on the Dnieper, and a northern, about Novgorod and Lake Ilmen. The latter, which was the larger and more numerous, and was mixed with the adjacent races, was brought into subjection about the year 862 by Rurik and the Waryaga Russi, a Scandinavian tribe which had got this name from the Finns; and his successor, Oleg, conquered the southern state, and united the two. Vladimir (980–1015) received Christianity from the Greeks, his capital being Kiev, which continued afterwards to be the principal seat of whatever ecclesiastical and secular knowledge existed in the country.<sup>5</sup> Already a century before the conversion of Vladimir the Bible had been trans-

<sup>1</sup> Schleicher, sects. 136, 144.

<sup>2</sup> Ibid. sect. 138. 3.

<sup>3</sup> Ibid. sect. 139.

<sup>4</sup> Adelung Mithridates, ii. pp. 610, 611.

<sup>5</sup> Ibid. p. 617–619.



lated into the Slavonic language by two Greek monks—Constantine, who afterwards took the name of Cyril, and Methodius.<sup>1</sup> The dialect into which this translation was made is thought to have been Old Servian,<sup>2</sup> which belonged originally to the neighbourhood of the Upper Vistula and Eastern Gallicia.<sup>3</sup> It has been in some degree modernised from time to time, and still continues to be the language of religion; up to the beginning of the eighteenth century it was the written language of all Russia.<sup>4</sup> Bopp calls it Old Slavic; Miklosich calls it Old Slovenic; and under the name of Old Slavonic it will be taken here as the representative of Slavonic speech.

202. Old Slavonic differs from Lithuanian in having much weaker vowel utterance. The original *i* and *u* were generally reduced to shevas *i* and *u*.<sup>5</sup> The original *a* became *e*, sometimes *o*.<sup>6</sup> The original *ā* is represented by *ē*,<sup>6</sup> sometimes by *a*, original *aa* by *o*, original *āa* by *a*.<sup>7</sup> The original *ī* tended to become *i*, the original *ū* to become *u*.<sup>8</sup> The Sanskrit *ē*, Guna of *i*, became before a vowel *oy*; before a consonant it is represented by *ē* or *i*. There is no Slavonic representative of Sanskrit *āi*. The Sanskrit *ō*, Guna of *u*, is represented by *u*, or before a vowel *ov*; Sanskrit *āu*, Vriddhi of *u*, by *av* before a vowel, *va* before a consonant.<sup>9</sup>

Slavonic *e* and *o* tend to become *i* and *u*.<sup>6</sup>

In the lengthening of the Slavonic vowels also for compensation of dropped sounds or other causes, there is a curtailment of vowel utterance; *e* indeed is lengthened to *ē*, *i* to *i* or to *e*, *u* to *u*, but *o* is increased only to *a*; <sup>9</sup> *i* and *u* cannot bear the stress of utterance in the beginning of a word, but are lengthened to *i* and *u*.<sup>5</sup> Lithuanian tends to take *y* before an initial vowel of word or syllable (176), probably to give force to the vowel (Def. 26) in the strengthening of vowel utterance which was called forth by Finnish influence. In Old Slavonic something similar may be observed; probably an effort to help the weakness of vowel utterance. Thus *y* is prefixed to initial *e*, and *v* to initial *u*; <sup>10</sup> *ē* also seems to have had a broader and a narrower utterance, being broad always when initial, and the broad *ē* seems to have always taken *y* to help it, being written *ya*; <sup>11</sup> and *y* or an ante-palatal, because it involves *y*, has a tendency to be followed by *a*, because it strengthens and broadens the weak vowel utterance; neither *i* nor *u* can be preceded by *y*.<sup>12</sup>

It is probably owing to the weakness of the vowels, that when they are initials there is a tendency to prefix consonants to them, not only *y* and *v*, but *n* also to take the stress of initial utterance.<sup>13</sup>

Old Slavonic has no diphthong, but changes the *i* and *u* of the original diphthongs into *y* and *v*; <sup>14</sup> it also tends to contract concurrent vowels into a single vowel.<sup>15</sup>

The vocalic weakness of Slavonic is connected with a feature

<sup>1</sup> Mosheim, Eccl. Hist., Book iii. chap. i.

<sup>2</sup> Adelung Mithridates, ii. p. 621.

<sup>3</sup> Ibid. ii. p. 635.

<sup>4</sup> Ibid. ii. pp. 620, 622.

<sup>5</sup> Miklosich, Slav. Gram., i. p. 198.

<sup>6</sup> Ibid. i. pp. 2, 3.

<sup>7</sup> Ibid. i. p. 102.

<sup>8</sup> Ibid. i. pp. 5, 6.

<sup>9</sup> Ibid. i. pp. 16, 183-185.

<sup>10</sup> Ibid. i. p. 198.

<sup>11</sup> Ibid. i. pp. 47, 198.

<sup>12</sup> Ibid. i. pp. 53, 204.

<sup>13</sup> Ibid. i. pp. 214, 296.

<sup>14</sup> Ibid. i. p. 199.

<sup>15</sup> Ibid. i. p. 196.

found also in a somewhat less degree in Sanskrit; which is weak in its vocalism. This is the use of the vibratiles as vowels to form syllables without any other vowel (2); which arises from the small difference that is felt between the vocal sound of a vowel and the sustained sonancy of a vibratile. Thus *er* and *el* before a consonant are apt to become in Old Slavonic and some other Slavonic languages *ɣ* and *ʎ*, forming syllables like vowels (2); *rř*, *lř*, and *rũ*, *lũ* before a consonant also, are apt to become *ɣ* and *ʎ*, forming syllables, in some of the Slavonic languages.<sup>1</sup>

And probably owing to the sustained sonancy with which *r* and *l* are thus wont to be uttered, they are not permitted as consonants before any other consonant except *y*; because in this position their sonant utterance would be curtailed. To avoid such concurrence they are put before the vowel of the syllable, which is then either absorbed by them or lengthened by the addition of their sonancy.

203. A weak pressure of breath in the utterance of the consonants appears in Slavonic as in Lithuanian from the reduction of the aspirates, of which it has only *t'* and *č'*. And this produces in Slavonic (Def. 26), as in Lithuanian, a tendency to prefix *y* to a vowel after a consonant. But Slavonic has not the same palatal character which in Lithuanian seems to indicate such relaxation of the consonant utterance. It has no palatals, nor any ante-palatal tenuis or medial. The *ʎ*, which it has in common with the Tartar languages, it probably got from these; as in these it belongs to the words whose vowels are hard; and seems, therefore, to arise from that distinction of hard and soft which is indigenous in those languages (IV. 4).

That *w* is not used like the above-mentioned use of *y* is due to the smallness of the guttural action in the vowels by reason of their weakness; and the great use of *y* causes a tendency to soft sibilation which is in Lithuanian also (176).

The pressure of breath that was in the original Indo-European *s* was sometimes eased in Slavonic by opening the closure so that it became a mere breathing *h*. And as Slavonic had no palatal, it moved forward *k'* and *ç'*, sounding them as *s*.<sup>2</sup>

204. It seems to be a mark of indolent utterance that there is in Slavonic, as in Sanskrit and Lithuanian (175), a tendency to absorb the nasals into the vowels. Thus before consonants and in the end of a word *en* becomes *ẽ*, and *om* becomes *ũ* in some of the languages; *on* also before consonants becomes *ũ*.<sup>3</sup>

Slavonic utterance is strongly marked with a want of versatility; as appears from the extent to which assimilation is carried both in the vowels and in the consonants, and from the avoidance of hiatus in the middle of original Old Slavonic words, by insertion of *y*, *v*, or *n*, or by changing *ũ* or *u* to *e*.<sup>4</sup>

The assimilation of *o* to *a*, or *e* following it, does not occur in Old Slavonic. But *ẽye* becomes *ẽẽ*, *ẽya* *ẽẽ*, *aye* *aa*, *iye* *ii*, *uye* *uu*, *au* *aa*, *yo ye*, *yẽ yi*, *yũ yi*, *oa* *aa*, *oã* *ãã*, *oe* *ee*.<sup>5</sup>

Of two concurrent consonants, if the second be sonant the first

<sup>1</sup> Miklosich, i. pp. 2, 4, 5; ii. Einleit, pp. xv. xvi.

<sup>3</sup> Ibid. i. pp. 3, 4.

<sup>4</sup> Ibid. i. pp. 187, 189, 295.

<sup>2</sup> Ibid. i. p. 202.

<sup>5</sup> Ibid. i. pp. 192-196.

must be sonant, if the second be surd the first must be surd (178). If an ante-palatal sibilant, or *l'*, be preceded immediately either by *t'* or by a dental sibilant, this preceding consonant becomes ante-palatal.

If a labial be followed by a vowel which has *y* before it, the *y* is changed into *l*,<sup>1</sup> perhaps because the labial involves so little pressure of breath on the lips that it repels the breath from passing over the point of the tongue, and this is diverted to the sides of the tongue.

Generally *t* and *d* are dropped before *l*, *n*, *m*, *h*, or *s*, in the middle of a word, *d* also before *z* or *z*, *p* and *b* before *n*, *t*, or *s*, *r* also after *b*; and the combinations *st'*, and *st'*, are lightened in various ways.<sup>2</sup> The dental mutes are so breathless, that they do not suit the breathing consonants except *r*, which from its frequent use as a vowel is an easier utterance; the post-palatals have more breath; labials do not suit dentals. And owing to want of versatility of utterance, the transitions of utterance which are less easy are avoided.

When *r*, *l*, or *n* is followed by *y* before a vowel it becomes ante-palatal;<sup>3</sup> but *t*, *d*, in the same case become *ts*, *dz*, in Old Slavonic, as it has no *t* or *d*, and then these become *st*, *zl*,<sup>4</sup> because *t*, *d*, being momentary, while *s*, *z*, have duration, the change of action is less sudden in uttering *st*, *zl*, than in uttering *ts*, *dz*, the tongue having time to move into the position for *t* and *d* during the latter part of the utterance of *s*, *z*. But *ty*, *dy*, become also *t'*, *z'*, in Old Slavonic.<sup>4</sup>

*Y* before a vowel, and following *tr*, *dr*, acts on *t*, *d*, through *r*, so that they become *st*, *zl*.<sup>5</sup>

The transitions of utterance in *ht*, *gt*, *ht*, are often eased by changing *k*, *g*, *h*, to *s*; and often *k* is dropped before *t* in a root.<sup>6</sup>

As Slavonic had no palatal, *k*, *g*, *h*, before *e*, *ē*, *i*, *ī*, or before *y*, followed by a vowel, became *t'*, *z*, *s*, or *t'*, *z*, *s*, the latter being the earlier change;<sup>7</sup> and these changes may take place when the consonant, instead of being single, is followed by *r*.<sup>8</sup>

The dentals *t'*, *z*, *s*, become ante-palatal before the palatal vowels, and before *r*, *l*; *st*, *zl*, before *y* followed by a vowel may become *st*, *zl*.<sup>9</sup> There is sometimes an insertion of *z*, *s*, to facilitate the transition from one utterance to another<sup>10</sup> (178, 203).

205. Slavonic has no nominal stems consisting of mere roots.<sup>11</sup>

Miklosich gives 185 suffixes, which are used to form nominal stems, most of which are excessively abstract in their own significance.

The suffix, masculine *-u*, feminine *-a*, neuter *-o* (originally *a*), is both primary and secondary, that is, used both with roots and with stems. The signification of nouns substantive and adjective formed with *-u* is very various, as *gray cantus*, *lit'edl'y simulator*, *plot'u, sapes*, *ostav'u relictio*, *slaviy lusciniā*, *grazdi stabulum*.<sup>12</sup>

If the root ends in *a* or *ē*, *y* or *v* is inserted before the suffix to avoid hiatus; and *-u* is dropped after *y*.<sup>12</sup>

If the root ends in *i*, the *i* is either Gunate to *oy* or left unchanged.

<sup>1</sup> Miklosich, i. pp. 295, 296.

<sup>3</sup> Ibid. i. p. 202.

<sup>4</sup> Ibid. i. p. 219.

<sup>2</sup> Ibid. i. pp. 225-227, 296.

<sup>5</sup> Ibid. i. p. 220.

<sup>6</sup> Ibid. i. p. 238.

<sup>7</sup> Ibid. i. pp. 239, 240.

<sup>8</sup> Ibid. i. p. 250.

<sup>9</sup> Ibid. i. pp. 276-279, 282, 283.

<sup>10</sup> Ibid. i. p. 283.

<sup>11</sup> Ibid. ii. p. i.

<sup>12</sup> Ibid. ii. pp. 2, 12.

In the latter case *y* or *v* is inserted before the suffix to avoid hiatus; and *-u* is dropped after *y*.<sup>1</sup>

If the root ends in *ũ* (originally *u* or *ũ*), *ũ* becomes *av* or *ov*, or remains. In the latter case *ũ* becomes *u* or *v*, and *u* is divided from *-u* by *y* or *v*.<sup>2</sup>

If the root ends in *l* or *r* this is almost always raised to *al*, *ol*, *el*, *ar*, *or*, *er*, *ir*,<sup>3</sup> with this suffix.

If the vowel in the middle of the root be *ĩ*, *i*, *ũ*, *u*, *e*, *ĩ*, *ĩ*, *ẽ*, it is apt to be strengthened either by Guna or by being lengthened or broadened.<sup>4</sup>

If this suffix be attached to verbal stems ending in *i* or *a*, this *i* or *a* is sometimes dropped before it.<sup>5</sup> But as a secondary suffix it is seldom found except in the formation of composite stems, particularly those which express possession; and the ending of the compound is dropped before *-u*.<sup>6</sup>

The suffix *-u* (originally *-u*) is hard to be distinguished from the *-u*, which corresponds to original *-a*, as already, in the oldest Slavonic, the former often follows the declension of the latter.<sup>7</sup>

The suffix *-i* subjoined to roots forms masculine substantives; and subjoined to substantive stems, forms feminine collectives.<sup>8</sup>

The suffix *-u* is both primary and secondary; it often indicates the feminine.<sup>9</sup>

The remaining suffixes present no noteworthy feature except the rich development of subsidiary elements which they exhibit.

**206.** Compound nominal stems are distinguished from mere coalitions of words into names of substantive ideas, by this, that the former have only one accent, the latter may have more than one, each member retaining its own.<sup>10</sup>

When noun (substantive or adjective) is compounded with noun, final *u* or *a* of the first is replaced by *o*, final *i* by *e*, with few exceptions; and to a final consonant of the first, *o* is subjoined. This *o* maintains itself even where euphony would generally require *e*; <sup>11</sup> it is a composition vowel (163).

In coalitions of noun with noun the ending of the first is regularly dropped.<sup>12</sup>

Compounds of a preposition with a noun following it, have no composition vowel, but take a suffix perhaps to give them combination.<sup>13</sup>

Often a compound noun is resolved into its components, each with the case ending; and these are often separated by intervening words.<sup>14</sup>

The determining member generally goes first in compositions and coalitions.<sup>15</sup>

**207.** The following are the case endings for the different stems of nouns substantive and adjective in the three numbers, the case ending being substituted for the stem ending: <sup>16</sup>

<sup>1</sup> Miklosich, ii. p. 3.

<sup>2</sup> Ibid. ii. p. 15-40.

<sup>3</sup> Ibid. ii. p. 53.

<sup>4</sup> Ibid. ii. p. 347.

<sup>5</sup> Ibid. ii. p. 350.

<sup>6</sup> Ibid. ii. p. 5.

<sup>7</sup> Ibid. ii. pp. 41, 47.

<sup>8</sup> Ibid. ii. pp. 53, 54.

<sup>9</sup> Ibid. ii. p. 349.

<sup>10</sup> Ibid. iii. p. 9-44.

<sup>11</sup> Ibid. ii. pp. 7, 9.

<sup>12</sup> Ibid. ii. pp. 49, 51.

<sup>13</sup> Ibid. ii. p. 59.

<sup>14</sup> Ibid. ii. p. 401.

	Stem ending	-u (-a)	-o, neut.	-a, mostly fem.	-u (-u)	-i	-r, fem.	-en, masc.	-er, fem.
SINGULAR.	{ Nom. . . .	-u	-o	-a	-u	-i	-u	-u	-i
	{ Voc. . . .	-e	-o	-o	-u	-i	-u	-eni	-i
	{ Accus. . . .	-u	-o	-ā	-u	-i	-vre	-ene	-ere
	{ Gen. . . .	-a	-a	-u	-u	-i	-vre	-ene	-ere
	{ Dat. . . .	-u	-u	-ē	-ovi	-i	-vri	-eni	-eri
	{ Instr. . . .	-umi	-umi	-ā	-umi	-imi	-vriyā	-enimi	-eriyā
	{ Loc. . . .	-ē	-ē	-ē	-u	-i	-vri	-eni	-eri
DUAL.	{ Nom., Voc. . . .	-a	-ē	-ē	-u	-i	-vri	-eni	-eri
	{ Accus. . . .	-a	-ē	-ē	-u	-i	-vri	-eni	-eri
	{ Gen., Loc. . . .	-u	-u	-u	-u	-iyu	-vriyu	-eniyu	-eriyu
PLURAL.	{ Dat., Instr. . . .	-uma	-uma	-ama	-uma	-ima	-vama	-enima	-erima
	{ Nom., Voc. . . .	-i	-a	-u	-ove	-iye	-vre	-ene	-ere
	{ Accus. . . .	-u	-a	-u	-u	-i	-vre	-ene	-ere
	{ Gen. . . .	-u	-u	-u	-ovv	-iy	-vvu	-envv	-ervv
	{ Dat. . . .	-omv	-omv	-amv	-omv	-envv	-vramv	-enimv	-erimv
	{ Instr. . . .	-u	-u	-amv	-umv	-imv	-vramv	-enimv	-erimv
	{ Loc. . . .	-ēhv	-ēhv	-ahv	-uhv	-ihv	-vrahv	-enihv	-erihv

Stems ending in *-inv*, generally denoting inhabitants of places, drop *-inv* in the plural; and those in *yaninv* generally follow in the plural the consonantal stems, or, as one might infer from the accusative, the *-i* stems.<sup>1</sup>

The adjective *-ya* stems make the vocative singular like the nominative.<sup>2</sup>

Feminine *-i* stems make the instrumental singular in *-iyā*, and the nominative vocative plural in *-i*.<sup>3</sup>

Neuter stems in *-en* or *-et* make the nominative, vocative, accusative singular in *-ē*, those in *-es* make it in *-o*, and in the nominative vocative accusative plural they all add *-a*.<sup>4</sup>

208. The table on next page shows the declension of the pronouns.<sup>5</sup>

The nominative accusative of the neuter of *t<sub>v</sub>* is *to* singular, *tē* dual, *ta* plural; of *moy* is *moye* singular, *moy* dual, *moya* plural. The remaining cases of both are the same as the masculine. *Y<sub>v</sub>*, demonstrative relative, is declined as the *y* of *moy*, nominative accusative singular masculine being *i*.<sup>6</sup>

The nominative accusative of the neuter of *kvy* is *koye* singular, *koi* dual, *kaya* neuter; the remaining cases are the same as the masculine. The nominative accusative of the feminine of *kvy* is *kaya* singular, *koi* dual, *kvyē* plural; the remaining cases of the dual and plural are the same as the masculine, and those of the singular the same as feminine *moya*, putting *k* for *m*.<sup>7</sup>

The nominative accusative of the neuter of *si* is *se* singular, *si* dual and plural, the remaining cases the same as the masculine.<sup>8</sup>

<sup>1</sup> Miklosich, iii. p. 14.

<sup>2</sup> Ibid. iii. p. 10-12.

<sup>3</sup> Ibid. iii. p. 36.

<sup>4</sup> Ibid. iii. pp. 42, 43.

<sup>5</sup> Ibid. iii. p. 45-53.

<sup>6</sup> Ibid. iii. pp. 48, 49.

<sup>7</sup> Ibid. iii. p. 50.

<sup>8</sup> Ibid. iii. p. 52.

	1st pers.	2d pers.	Reflexive.	Masc.	Fem.	Masc.	Fem.	Masc.	Fem.	Masc.
SINGULAR.	Nominative . . . . .	<i>až</i>	...	<i>tu</i> ille.	<i>ta</i>	<i>moy</i>	<i>moya</i>	<i>ku</i> inter-rog. indef.	<i>si</i> hic.	Sans. <i>vi</i> x <i>ra</i> .
	Accusative . . . . .	<i>mě</i>	<i>sě</i>	<i>ty</i>	<i>tā</i>	<i>moy</i>	<i>moyā</i>	<i>ky</i>	<i>si</i>	<i>vi</i> si
	Genitive . . . . .	<i>mene</i>	<i>sebe</i>	<i>togo</i>	<i>toyē</i>	<i>moyego</i>	<i>moyečē</i>	<i>kyego</i>	<i>sego</i>	<i>vi</i> sego
	Dative . . . . .	<i>mənē</i>	<i>sebē</i>	<i>tonu</i>	<i>toy</i>	<i>moyemu</i>	<i>moyey</i>	<i>koyemu</i>	<i>semu</i>	<i>vi</i> semu
		<i>mī</i>	<i>sī</i>							
DUAL.	Instrumental . . . . .	<i>mnoyā</i>	<i>soboyā</i>	<i>tēmī</i>	<i>toyā</i>	<i>moimī</i>	<i>moyečā</i>	<i>kūimī</i>	<i>sinī</i>	<i>vi</i> sēmī
	Locative . . . . .	<i>mūnē</i>	<i>sebē</i>	<i>tomī</i>	<i>toy</i>	<i>moyemī</i>	<i>moyey</i>	<i>koyemī</i>	<i>semī</i>	<i>vi</i> semī
	Nominative . . . . .	<i>rē</i>	...	<i>ta</i>	<i>tē</i>	<i>moya</i>	<i>moi</i>	<i>kaya</i>	<i>siya</i>	...
	Accusative . . . . .	<i>ua</i>	...	<i>ta</i>	<i>tē</i>	<i>moya</i>	<i>moi</i>	<i>kaya</i>	<i>siya</i>	...
	Genitive, Locative . . . . .	<i>nyu</i>	...	<i>toyu</i>	<i>toyu</i>	<i>moyeyu</i>	<i>moyeyu</i>	<i>koyeyu</i>	<i>seyu</i>	...
PLURAL.	Dative, Instrumental . . . . .	<i>nama</i>	...	<i>tēna</i>	<i>tēna</i>	<i>moima</i>	<i>moima</i>	<i>kūma</i>	<i>sinā</i>	...
	Nominative . . . . .	<i>ny</i>	...	<i>tī</i>	<i>ty</i>	<i>moi</i>	<i>moyē</i>	<i>tī</i>	<i>si</i>	<i>vi</i> si
	Accusative . . . . .	<i>ny</i>	...	<i>ty</i>	<i>ty</i>	<i>moyē</i>	<i>moyē</i>	<i>kūyē</i>	<i>siyē</i>	<i>vi</i> sē
	Genitive . . . . .	<i>nasu</i>	...	<i>tēlu</i>	<i>tēlu</i>	<i>moilu</i>	<i>moilu</i>	<i>kūlu</i>	<i>silu</i>	<i>vi</i> sēlu
	Dative . . . . .	<i>namu</i>	...	<i>tēmu</i>	<i>tēmu</i>	<i>moimu</i>	<i>moimu</i>	<i>kūimu</i>	<i>simu</i>	<i>vi</i> sēmu
	Instrumental . . . . .	<i>namī</i>	...	<i>tēmī</i>	<i>tēmī</i>	<i>moimī</i>	<i>moimī</i>	<i>kūimī</i>	<i>sinī</i>	<i>vi</i> sēmī
	Locative . . . . .	<i>nasu</i>	...	<i>tēlu</i>	<i>tēlu</i>	<i>moilu</i>	<i>moilu</i>	<i>kūilu</i>	<i>silu</i>	<i>vi</i> sēlu

The nominative accusative of the neuter of *visi* is *visē* singular, *visa* plural. The nominative singular feminine of *visi* is *visa*, accusative singular feminine *visā*, nominative accusative plural feminine *visē*. The remaining cases of the neuter singular and plural and of the feminine plural, are the same as the masculine, those of the feminine singular are the same as feminine *si* with *vi* prefixed.<sup>1</sup>

209. In the nominative singular of the noun, final *s* is dropped, and *a* preceding it has become *u*; in the neuter, final *m* is dropped, and *a* preceding it has become *o*. Final *ā* has become *a*; and the stem endings *u*, *ū* have become *u*, *ū*; *ya* often becomes *yi*, *iya* becomes *iy*.<sup>2</sup>

The vocative singular when different from the nominative reduces *a* to *e*, *ā* to *o*, while it raises the final vowel of the *-i* stems and *-u* stems. In Sanskrit also these stems strengthen the final vowel in the vocative.<sup>3</sup>

The *m* of accusative singular is dropped without leaving any trace except in the feminine *-a* stems; the connective *a* changed to *e* remains in the consonantal stems.<sup>3</sup>

In the genitive singular also of the consonantal stems the connective *a* changed to *e* remains while the *s* has been dropped. Final *u* and *i* are raised to *u* and *i*, as in Sanskrit the *u* and *i* are Gunated before *s*. The singular genitive ending *-a* of first and second declension is deduced by Schleicher from *asya* (*aya*, *ā*). To this Miklosich says that there are insuperable phonetic objections; but he does not state them. He considers that it represents the old ablative *-āt* (4),<sup>4</sup> but he does not explain how the ablative with its comparatively small range of use could have supplanted the genitive. The genitive singular of the feminine *-a* stems, which ends in *-u* unless *y* precede the *a*, when it ends in *-ē*, Miklosich deduces from *-ā*, which has undergone the same two changes in the present participle; and this *-ā* he deduces from the old locative *-ām*.<sup>4</sup> But as the long vowel preceding the genitive *s* in Sanskrit in the plural caused it to become *n* (9), by strengthening the sonancy and suggesting an easier passage of the breath, it may have here caused a tendency to a similar change; and the nasal would be favoured by the influence of preceding *y* being unfavourable to a guttural breathing. Bopp considered *n* in the Sanskrit genitive plural to be occasioned by hiatus,<sup>5</sup> but if a consonant was needed to avoid hiatus how came the original *s* to be dropped? He deduced the Slavonic nasal in the genitive from the original final *s*, and compared the final *ν* in the plural and dual of the Greek verb<sup>6</sup> where Sanskrit has *s* (66).

The dative singular of first and second declension ends in *-u*, which, as in the Irish dative (111), is doubtless due to an original *ū* (184). The other datives all take up *i*, corresponding to Sanskrit *ē*.

The instrumental singular ends in *mi*, as in Lithuanian; and this corresponds to an original *ūi*. It is absorbed as a nasalisation by

<sup>1</sup> Miklosich, iii. pp. 52, 53.

<sup>4</sup> Ibid. iii. p. 4.

<sup>2</sup> Ibid. iii. p. 2.

<sup>3</sup> Ibid. iii. p. 3.

<sup>5</sup> Bopp, Vergl. Gram., sects. 17 b, 246.

<sup>6</sup> Ibid. sect. p. 271.

feminine *-a*. The feminine *i* stems, and also for the most part the feminine *a* stems,<sup>1</sup> add to their stem ending in the instrumental singular *ya*, which is a pronominal element, as may be seen in the pronominal declension. The instrumental relation is so strong an element of thought that it coalesces with the concrete idea of its object less readily than the more abstract case relations. The thought of it consequently elicits an abstract sense of the object as such, which is thought with attention directed to it; and this mental act strengthened with a sense of the feminine gender is expressed by a pronominal element (Def. 7).

A similar influence of the dative and instrumental relations, as they are thought in the dual and plural, and of the locative relation as thought in the plural, has strengthened the *v*-stem ending with *a*; and has strengthened the stem ending in the genitive locative dual of all the consonantal stems with *i*, which probably is pronominal (184), being needed because these stems are deficient in an abstract objective part or substance after the attributive part (Def. 4).

The consonantal stems take *i* also in other cases as given above.

Miklosich thinks the locative endings *-ye*, *-ene*, which are in the oldest sources, are perhaps genitive. The ending *-z* is due to the coalescence of locative *i* with *i* added to the stem ending. The locative *-u* of fourth declension seems to be a reduction of *-ovi*, which corresponds to the Vedic locative ending of the *u* stems *-avi*,<sup>2</sup> and the *-e* of the first three declensions to the coalescence of *a* and *ā* with *i*.

The nominative vocative accusative dual of the first declension corresponds, like the Zend *-a*, to Vedic *-ā* (12). In the others it is similar in its formation to the Sanskrit.

In genitive locative dual *-u* corresponds to Sanskrit *-ōs*; and in dative instrumental *-ma* to Sanskrit *-b(y)ā(m)*.

The nominative plural of first declension has *-i* corresponding to *-ē* in the Sanskrit pronouns; that of second declension *-a* to Sanskrit *-ā(ni)*; that of third declension is same as genitive singular *-y* or *-ē*, corresponding like this to Sanskrit *-ās*; the *-e* of the others corresponds to Sanskrit *-as*.

The accusative plural has dropped *-ns*; the genitive plural has reduced *-ām* to *-u*; the dative plural has reduced *-b(y)as* to *-my*; the instrumental plural has reduced *-b(is)* to *-mi*, the first and second declension absorbing *-mi* into *y*; the locative plural has *-h<sub>y</sub>* for *su*, preceded by *z* in first and second declension, as in Sanskrit.

210. The stems of the personal pronouns receive remarkable additions; *tebe*, *sebe* correspond probably to Sanskrit *tava*, *sava*; but *tē*, *sē* cannot, and these show that *mē*, *mene* involves a distinct pronominal element *ne* (155). Perhaps the heavier ending of the dative, locative, and instrumental singular weakened *me*, so that under the influence of *n* following it it became *my*. In the instrumental singular the stems seem to be strengthened with *ya*, and their *a* lengthened as in composition, which seems to have affected also *ta* and *sa*; *-mi* was absorbed.

<sup>1</sup> Miklosich, iii. p. 6.

<sup>2</sup> Bopp, Vergl. Gram., sect. 199.



The nominative dual of first person has taken up *i*; that of the second, and the accusative dual of both, have *a* corresponding to original *ā*. Is there more distinction of the individuals in *i* as expressing juxtaposition than in *ā* as expressing extension?

The nominative plural *-y* corresponds perhaps to original *-ās*, like genitive singular third declension; *tī* corresponds to *tē*, the accusative plural to *-aus*.

The datives singular *mī*, *tī*, *sī*, the genitives singular *mě*, *tě*, *sě*, and the accusatives plural *ny*, *vy*, are enclitic. The latter are used also for the dative.<sup>1</sup>

In the demonstrative pronouns the genitive ending *-go* is probably a pronominal element *ga* corresponding to Sanskrit *gā*,<sup>2</sup> and this is preceded by the composition vowel, changed, however, to *e* by *y* preceding it. The dative ending *-mu* is the dative of original *sma*,<sup>2</sup> and the feminine pronouns take *-sya*, whose genitive *-syās* is represented by *-yě*. Before the case endings beginning with *m* the stems take *i*, probably from the *y* which originally followed the *ū* which *m* represents (11).

The genitive plural *-sīm* became *-hū*, and as it was thus reduced almost to the same form as the locative *-ihū* (4), the *i* also was taken from the latter.

211. The adjectives, except the possessive adjectives (223), may be declined, as in Lithuanian, in composition with *yū*, the adjective taking the case endings as well as *yū*, or being prefixed in its stem form. The latter takes place in all the cases whose ending begins with a consonant.<sup>3</sup>

The comparative of adjectives is formed by the suffix *-iyūs* (5), to which *-yū* is added, except in the nominative singular masculine and neuter. If the stem ending *ū* of the adjective is dropped before the comparative element, this becomes *-iyūs yū* or *-yūs yū*; if not it coalesces with *i* of the comparative element into *ē*.<sup>4</sup>

The comparative serves also in the Slavonic languages for superlative, being then accompanied in the younger languages, and sometimes also in Old Slavonic, by a strengthening particle.<sup>5</sup>

212. The numerals for 3 and 4, *triye*, *teturiye* when masculine, are declined as plurals of masculine *i* stems, those for 5 to 10 end in *-ti*, and are declined as feminines in the three numbers.<sup>6</sup>

The ordinal of 3 is formed with *-ti*, those of 4, 5, 6, 9, 10 with *-tū*, those of 7, 8 with *-mū*, but they are all declined in composition with *yū* (151, 225).

213. The verbs have a present stem and a non-present or infinitive stem. The latter is in some verbs—I. primary, *i.e.*, the mere root. Other verbs form the infinitive stem with a suffix; of which suffixes there are five, *nā*, *ē*, *i*, *ā*, *ua* (*ova*).<sup>8</sup>

II. The stems formed with *nā* subjoined to a root are transitive or intransitive, many of them passive; some of them can drop the

<sup>1</sup> Miklosich, iii. p. 46.

<sup>2</sup> Ibid. iii. p. 47.

<sup>3</sup> Ibid. iii. p. 55.

<sup>4</sup> Ibid. ii. p. 322.

<sup>5</sup> Bopp, Vergl. Gram., ii. sect. 305.

<sup>6</sup> Miklosich, iii. pp. 35, 37.

<sup>7</sup> Bopp, Vergl. Gram., ii. sect. 322.

<sup>8</sup> Miklosich, ii. p. 420.

suffix. If the root forms also an  $\bar{e}$  stem, the  $n\bar{a}$  stem is distinguished from this by perfectivity. The deverbial  $n\bar{a}$  stems are perfective (227), the denominative passive.<sup>1</sup> Miklosich considers that  $-n\bar{a}$  corresponds to Sanskrit  $-nu$ , Greek  $-ν$ , Gothic  $-n$ , and that the nasal of  $\bar{a}$  came from an older  $\bar{u}$ ; before a vowel the  $\bar{u}$ , like  $\bar{y}$ , becomes  $ov$ .<sup>2</sup>

III. The primary  $\bar{e}$  stems, *i.e.*, those formed from roots, are generally neuter and durative. If the root forms also an  $i$  stem or an  $a$  stem, the  $\bar{e}$  stem is passive.

The denominative  $\bar{e}$ -stems are durative of inchoative, and signify to become what the noun denotes.<sup>3</sup>

To  $-\bar{e}$  corresponds Sanskrit  $-ya$ , which, according to Miklosich, must have become first  $-ay$ , then  $-ey$ , also Latin  $-\bar{e}$ , Gothic  $-ai$ .<sup>4</sup>

IV. The  $i$  stems are all denominative, according to Miklosich, and generally durative, their signification being causative, either transitive or reflexive.<sup>5</sup> But he says that when a primary stem and an  $i$  stem belong to the same root, the latter is causative of what the former signifies. The radical vowel is Gunated as in Sanskrit, and  $-i$  corresponds to Sanskrit  $-aya$ .

Miklosich thinks that in Sanskrit, and in all the other languages of the family, the causative was formed on a verbal noun to which the first  $a$  of  $aya$  belonged, the causative element being  $-ya$ .<sup>6</sup>

Amongst the  $i$  stems, there are also some intensives and diminutives.<sup>7</sup>

V. The  $a$  stems are either primary or deverbial or denominative. The primary and denominative are durative unless they have a prefix. The deverbial are iterative. When the latter are formed on primary stems the radical vowel is strengthened, but with a different vowel increase from that of the nominal  $\bar{u}$  stems.<sup>8</sup> The  $-a$  of the denominative  $a$  stems corresponds to Sanskrit  $-aya$ , the stem ending of the noun being dropped. The deverbial  $a$  stems, in the strengthening of the radical vowel and in their meaning, approach in some degree to the Sanskrit intensives. Even primary verbs take this  $-a$ , which, however, with some deverbals and denominatives, they keep only in the infinitive.<sup>9</sup> No class of verbs includes so many intensives and diminutives as the  $a$  class.<sup>10</sup>

The combination  $sk$  is properly in Slavonic one of those elements by which roots are determined. It remains accordingly through all the verbal forms; thus  $i$  to go,  $iska$  to seek,  $p\bar{i}$  to sing,  $piska$  to sing with the flute.<sup>11</sup>

VI. The  $ora$  stems are all secondary, deverbial or denominative. The suffix consists of  $u$  and  $a$ ,  $u$  arising, according to Miklosich, from the nominal  $\bar{u}$  stems, which correspond to the Sanskrit  $a$  stems, and spreading from them to others, and  $a$  being imperfective (227).

The diminutive of these is formed with  $-kora$ ,  $-kiva$ .<sup>12</sup>

214. From the infinitive stem, the aorist is formed either by subjoining to it, if it end in a consonant, the short person endings, a

<sup>1</sup> Miklosich, ii. pp. 421, 423.

<sup>3</sup> Ibid. ii. p. 430; iv. p. 296.

<sup>5</sup> Ibid. ii. p. 435.

<sup>6</sup> Ibid. ii. p. 451; iv. p. 297.

<sup>8</sup> Ibid. ii. pp. 454, 469.

<sup>11</sup> Ibid. ii. p. 480.

<sup>9</sup> Ibid. ii. p. 468.

<sup>12</sup> Ibid. ii. p. 486.

<sup>2</sup> Ibid. ii. p. 429.

<sup>4</sup> Ibid. ii. pp. 433, 434.

<sup>7</sup> Ibid. ii. p. 452.

<sup>10</sup> Ibid. ii. p. 470.

connective vowel *e* being inserted, which, however, is different from the suffixed *-e* of the present, or by subjoining *s* (27) to it if it end in a consonant, before which *t*, *d*, *z*, *s*, are dropped, and the vowel strengthened for compensation, and *b* is dropped without such compensation; the *s* may become *h*; *r* and *l*, *mr* and *ml*, at the end of a stem are treated as vowels. These two formations are peculiar to the Old Slavonic and Servian.

In the latest form of the aorist, which is common to all the Slavonic languages, the *s*, which becomes *h* between vowels, is joined to a consonantal stem by a connective vowel *o*, which in the loss of the person endings of second and third singular became *e*. This *o* expresses the remotion of the past. The stems which end in *-nā* preceded by a consonant, sometimes change *nā* before *h* to *o*.<sup>1</sup>

If the verbal stem end in a vowel, the later aorist coincides with the earlier, as the *s* of the latter is *h* between vowels, and the vowel subjoined to the stem in the former is replaced by the final vowel of the stem.

The future subjoins *sy* (26) to the infinitive stem, but is formed only by the verb *bū*.<sup>2</sup>

The first past participle active is formed with the suffix *-s*, the second with *-lū*, used only as a predicate. The former is declined as ending in *-ysyū*, except in nominative singular masculine and neuter (211).

The past participle passive is formed with *-enu* or *-tu*.

The infinitive is formed with *-ti*, rarely *-tu*, the supine with *-tū*; <sup>3</sup> *-ti* might be a locative case or a genitive, more likely, according to Miklosich, a dative, *-tū* an accusative.

215. The present stem is distinguished by the suffix *e*, which corresponds to the Sanskrit conjugational vowel *a*.

Some verbs do not take this *e*. And the *i* stems and the primary *ē* stems take the suffix only in first singular present. Probably it coalesced in the other parts with the stem ending into *i*. Some verbs and classes of verbs have *i* before the *e*, as in Latin *cupio*, and in Greek *κῡάζω* (*κῡαγίω*).<sup>4</sup>

The present stem in some classes of verbs receives also internal change, in the strengthening or nasalisation of the radical vowel, or external addition, either *-i*, which Miklosich considers euphonic for the prevention of hiatus, or *-d*, which he connects with the root *dē*, Sanskrit *d'a* (159, 192), or reduplication, which, however, is found in only two verbs, *dā* to give, and *dā̃*<sup>5</sup> (189).

From the present stem is formed the imperfect, by lengthening the present suffix *e* to *ē* to express the going on in past time, and subjoining *h* or *ah*, *h* being same as *s* of the aorist, and becoming euphonicallly *ś* before *e*; the imperative by adding the old optative *i*; the present participle active by adding *-nt* to *o*, the prolonged present vowel by which it is absorbed into *ē*, if *y* precedes, into *ū* after any other consonant; and the present participle passive by the suffix *-mū*

<sup>1</sup> Miklosich, ii. pp. 487, 488.

<sup>2</sup> Ibid. ii. p. 488.

<sup>3</sup> Ibid. ii. pp. 328, 488, 489; iv. pp. 817, 844.

<sup>4</sup> Ibid. ii. p. 489-491.

<sup>5</sup> Ibid. ii. pp. 491, 492.

subjoined to *i* or *o*<sup>1</sup> as the vowel of the present, according to the ending of the stem.

The present participle passive is used also as an adjective in the sense of Latin adjectives in *-bilis*.<sup>2</sup>

216. The person endings of the present tense are :

	singular.	dual.	plural.
1st . . . . .	<i>-mi</i>	<i>-rě</i>	<i>-mŭ</i>
2d . . . . .	<i>-si</i>	<i>-ta</i>	<i>-te</i>
3d . . . . .	<i>-tŭ</i>	<i>-te</i>	<i>-ntŭ</i>

Those of the other tenses are :

	singular.	dual.	plural.
1st . . . . .	<i>-n</i>	<i>-rě</i>	<i>-mŭ</i>
2d . . . . .	<i>-s</i>	<i>-ta</i>	<i>-te</i>
3d . . . . .	<i>-t</i>	<i>-te</i>	<i>-nt</i>

The nasal of first singular and third plural of both sets is absorbed by preceding vowel, and if this be *e* it becomes *ĭ*.

The ending *-tŭ* of third singular present is often dropped, *-tŭ* of third plural less frequently. Very seldom *-mi* is found instead of *-mi*. The *-tŭ* of third singular is from *-ti*, *-ti*. The first dual is rarely *-ra* instead of *-rě*.<sup>3</sup>

The dual person endings, *-ta*, *-te*, were originally used without distinction of gender ; but afterwards *-ta* came into use for the third person as well as for the second, and in later writings, when the subject was a feminine or neuter noun, the dual person ending became *tě* or *te* in conformity with the final *ě* of the noun<sup>4</sup> (220).

Verbs, whose stem ends in a vowel and has no stem-suffix, sometimes have *-tŭ* for *-t* ; in the third singular of the short persons generally *-s* and *-t* are dropped,<sup>5</sup> and *-nt* is absorbed as a nasalisation.<sup>6</sup>

Old Slavonic knows nothing of the lengthening of the conjugational vowel *e* (Sanskrit *a*) in the first singular dual and plural which is found in Sanskrit (17). But in the Slavonic past tenses the first singular, dual, and plural takes before it *o*, corresponding to *ā*, the first person being reduced from *-om* to *-ŭ*. This vowel distinguishes the past in the simple aorist from the present, there being no distinction in the second and third dual and second plural. It must express a sense of the past, which is so often expressed by *a* ; and it indicates that the sense of the past is stronger with the first person than with the others.

In the aorist, *-sent*, *-hent* of the third plural become respectively *-sě*, *-sě*.<sup>7</sup>

217. There are also compound tenses in Old Slavonic expressed by the participles with tenses of auxiliary verbs.

A perfect active is expressed by the past participle in *-lŭ*, and the present of the verb *yes*, to be, a pluperfect by the same with the imperfect of *by*, to be. This participle without *yes* has an aorist signification.

<sup>1</sup> Miklosich, ii. p. 493 ; iii. p. 95.

<sup>3</sup> Ibid. iii. pp. 63, 64.

<sup>6</sup> Ibid. iii. p. 98-124.

<sup>4</sup> Ibid. iii. p. 67.

<sup>7</sup> Ibid. iii. pp. 80, 98-124.

<sup>2</sup> Ibid. iv. p. 832.

<sup>5</sup> Ibid. iii. p. 68.

A future active is expressed by the present of the perfective verbs, by the infinitive with the present either of *imā* habere, of *nať* in incipere, or of *hotē* velle; a future *exactum* by past participle in *-lŭ* with present of *bād* eintreten; a conditional or ideal by the same participle with aorist *bimŭ* or *bŭhŭ*, the past expressing the ideal as absent from actuality.<sup>1</sup> A passive is expressed by the active with reflex object *sě*, or by the passive participles with parts of the verbs *bŭ*, *bŭva*, *bād*, *yes*.<sup>2</sup>

218. Slavonic, like Lithuanian (180), takes up into the root elements of thought expressed by modifications of its vowels, and these modifications involve more steps of vowel increase than there are in Sanskrit, which has only Guna and Vriddhi.<sup>3</sup>

219. Slavonic has a weak comparative sense of substantive objects in respect of their qualities, so that qualities are apt to be thought not as adjectives with comparison of the substantive object (Def. 6), but by themselves as substantives, either in apposition to the substantive to which they belong, or connected with it by the copulative conjunction or by prepositions.<sup>4</sup> And for the same reason adjectives are apt to be used substantively, the general noun being dropped because the sense of comparison which involves it is faint.<sup>5</sup>

Abstract nouns often denote persons, the attribute which is used to designate the persons being abstracted as a substantive instead of inhering in their substance.<sup>6</sup>

An attribute cannot in Slavonic be predicated of an adjective used substantively, because, there being no article with the adjective, this has not sufficient substance to support the copula as its subject, and a substantive is needed for that purpose.

The sense of possession is so strong that the thought of the possessor is wont to enter into the idea of what belongs to him, distinguishing it from other objects of the same name, so as to be expressed by an adjective agreeing with it (*Hectorea conjur*) instead of by a substantive governed by it in the genitive case, or through a preposition.<sup>7</sup>

The comparative sense of verbs seems to be weaker than that of substantives, so that instead of an adverb there is often an adjective agreeing with the subject.<sup>8</sup>

220. The analogy of the ending *e* of the nominative plural feminine has introduced in some places in New Slavonic a feminine form *me*, *ve* for the plural of the first and second personal pronouns; just as the third person ending of third dual of verbs has taken a feminine and neuter form *te* in the later remains of Old Slavonic<sup>9</sup> (216).

Feminine nouns may have been sometimes used originally to denote persons of the male sex, and masculines of the female sex, the designation being thought as a subordinate thing belonging to a man, or as an independent thing belonging to a woman (Def. 16). And nouns originally masculine may become feminine, because their stem ending generally belongs to feminine nouns, and the reason of its original use has been lost. The sense of gender prevails over the

<sup>1</sup> Miklosich, iv. p. 808.

<sup>4</sup> Ibid. iv. p. 3-5.

<sup>7</sup> Ibid. iv. p. 7-16.

<sup>2</sup> Ibid. iii. pp. 127, 128.

<sup>5</sup> Ibid. iv. p. 25-31.

<sup>8</sup> Ibid. iv. p. 16.

<sup>3</sup> Ibid. ii. Einl. p. xx.

<sup>6</sup> Ibid. iv. p. 6.

<sup>9</sup> Ibid. iv. p. 20.

analogy of the stem ending in many names of cities which are feminine though they end in *-y*.<sup>1</sup>

In the later languages, many masculine substantives are in the plural thought as neuter aggregates, and sometimes neuter plurals have feminine adjectives. In Old Slavonic, neuters in *-o* when used of persons take *-e* in the vocative singular like masculines in *-y*. There are no substantives of common gender.<sup>2</sup>

Slavonic, like Tentonic, shows in its use of the neuter a tendency to drop the element of living force (164). Thus when an adjective, or participle, or pronoun refers to substantives of different gender or whose gender is not noted, it is neuter (194), unless two substantives be closely connected with each other, when it agrees in gender, sometimes with one, sometimes with the other, the gender of one having prevailed over that of the other in the close connection of the two.<sup>3</sup> When the subject denotes a multitude the predicate is neuter without respect to the gender of the subject.<sup>4</sup>

In the weakening of the sense of gender, the masculine forms being more frequently used, tended to prevail over the feminine; and in the dative dual and plural, in which there is great similarity between the two genders, the feminine substantive is not unfrequently connected with a masculine adjective. In the plural also, in which the substantive idea is less distinct, the past participle in *-y*s is often masculine, though belonging to a feminine noun; and in many of the languages the participle in *-ly* has in the plural only masculine forms.<sup>5</sup> It is probably for a similar reason that in the later languages a neuter noun in the accusative not unfrequently has a masculine adjective.<sup>6</sup>

221. Old Slavonic has the dual number in all inflected classes of words through all cases and persons, and uses it whenever two things are spoken of, independently of the numeral *two*, or the adjective *both*. The same is true more or less of New Slavonic and Old Servian and New Servian, while the other Slavonic languages possess at present only some dual forms with which the thought of duality is no longer connected.<sup>7</sup>

New Slavonic, however, has in most places lost the nominative and the genitive locative of the dual of the first and second personal pronouns.<sup>8</sup>

The plural is frequently expressed by collectives, the attributive nature (Def. 4) of the individual being lost in that of the aggregate. And many substantives are used in the singular for the plural, as if they were collectives, the individual not being distinguished. But in the later Old Slavonic and in the living Slavonic languages collectives are not unfrequently used in the plural. The plural or the collective of the inhabitants is used to denote the country.<sup>9</sup>

Substantives which denote a continuous material without individual limitation (193), and abstract substantives, may be plural.<sup>10</sup>

<sup>1</sup> Miklosch, iv. p. 21-24.

<sup>2</sup> Ibid. iv. pp. 25, 35.

<sup>3</sup> Ibid. iv. pp. 33, 35.

<sup>4</sup> Ibid. iv. p. 54.

<sup>5</sup> Ibid. iv. pp. 36, 37.

<sup>6</sup> Ibid. iv. p. 34.

<sup>7</sup> Ibid. iv. p. 40.

<sup>8</sup> Ibid. iv. p. 41.

<sup>9</sup> Ibid. iv. p. 43-45.

<sup>10</sup> Ibid. iv. p. 46.

This indicates a weakness in the thought of the common attributive nature, so that it fails to come out clear of the individual objects noted in the formation of the idea. The singular of *veliko šao* may belong to a plural noun, the individual being lost sight of.<sup>1</sup>

Verbs and adjectives are generally connected in the plural with singular collectives,<sup>2</sup> the reference which they involve making the sense of substance more distinct.

Not unfrequently the verb is used reverentially in the plural with a singular subject.<sup>3</sup>

222. The first four cardinal numerals are adjectives, and agree with their substantive in gender, number, and case.<sup>4</sup> Those for 5 to 10 are feminine collective substantives, and govern what is numbered in the genitive plural.<sup>5</sup> This accords with a weak sense of the individual.

The attribute of the cardinals 5 to 10 was originally feminine singular, but afterwards neuter.<sup>6</sup> "So great," &c., are adjectives agreeing with noun; "so many," &c., are singular neuters; sometimes, however, they too agree with nouns.<sup>7</sup>

223. The third personal pronoun has in the nominative the stem *on*, in the other cases *yu*; in Bulgarian it has *tu* throughout.<sup>8</sup>

The Slavonic languages have not developed an article carried out completely in its applications;<sup>9</sup> though in the oldest writings there is an article *ize* used in imitation of the Greek; and the Slovenians and Upper and Lower Servians, from living in close connection with Germans, have, especially in the cities, developed an article out of *tu*, which, however, the present written language strives to banish.<sup>10</sup>

Those adjectives which involve least comparison with a general idea do not take the suffixed article (211). Such are in general the possessive adjectives (219) which denote relation with another noun without much sense of distinction from the general one, and the past participle active, as it belongs so subjectively to its substantive.<sup>11</sup> Adjectives also used predicatively are not apt to take the suffixed article,<sup>12</sup> for the reference is not so much to other things as to realisation in the subject. The suffixed adjective came more and more into use in course of time.<sup>13</sup>

224. The Slavonic languages have two negative particles, a simple negative *ne*, and a stronger negative *ni*, which has taken up *i* to strengthen it.<sup>14</sup> The particle *ne* is usually written in one word with the verb,<sup>15</sup> and often when thus prefixed changes its meaning to the opposite.<sup>16</sup> With similar effect it unites as prefix with a noun.<sup>17</sup>

The negative pronouns require a negative with the verb,<sup>18</sup> for the negative of the pronoun does not sufficiently affect the verb.

225. Prepositions are not unfrequently repeated before each of the words standing in the relation.<sup>19</sup>

The comparative of the adjective is in many of the languages not

<sup>1</sup> Miklosich, iv. p. 46.

<sup>4</sup> Ibid. iv. p. 53.

<sup>7</sup> Ibid. iv. p. 70.

<sup>10</sup> Ibid. iv. p. 130.

<sup>13</sup> Ibid. iv. p. 171.

<sup>16</sup> Ibid. iv. p. 188.

<sup>2</sup> Ibid. iv. p. 48.

<sup>5</sup> Ibid. iv. p. 55.

<sup>8</sup> Ibid. iv. p. 125.

<sup>11</sup> Ibid. iv. pp. 134, 136.

<sup>14</sup> Ibid. iv. p. 173.

<sup>17</sup> Ibid. iv. p. 252.

<sup>3</sup> Ibid. iv. p. 51.

<sup>6</sup> Ibid. iv. p. 59.

<sup>9</sup> Ibid. iv. pp. 125, 126.

<sup>12</sup> Ibid. iv. p. 170.

<sup>15</sup> Ibid. iv. p. 175.

declined, so as to agree in case with its noun,<sup>1</sup> the comparison which it expresses withdrawing it from close connection with the noun (151). For this reason also it takes *-yъ* to form the connection (211). On the other hand, some adjectives are not declined because their stem coalesces with the substantive. And sometimes substantives in apposition partially coalesce, and the last only takes the case ending.<sup>1</sup>

The genitive singular takes the place of the accusative singular in masculine substantives denoting living objects, but less frequently in the older language than in the later. The genitive may take the place of the accusative in the plural also of adjectives, participles, and pronouns.<sup>2</sup> The object, when strongly thought in its own idea, is only partially thought as object; and the act or relation is thought as affecting only part of it.

The accusative is often governed by nouns derived from transitive verbs.<sup>3</sup>

In negative sentences transitive verbs govern the genitive instead of the accusative; <sup>4</sup> for it is not the action as affecting the object that is denied, but the noun is the object of the denial of the action; the latter is denied of or from the former.

Neuter pronouns often are accusative in negative sentences instead of genitives,<sup>5</sup> perhaps because they fall in more closely to the verbal idea so as to be negated along with it.

The fundamental idea of the instrumental case is that along which the action takes place (10); it expresses not only the instrument, but also how often and how much, and the direction or manner of a process.<sup>6</sup>

226. The passive is expressed in Slavonic by active forms of neuter verbs (213), by the reflexive construction with the reflexive object, not separate as when it denotes a reflex action, but enclitic, or by the participles *-mъ*, *-enъ*, *-tъ*, with an auxiliary verb<sup>7</sup> (217). Middle verbs also are expressed with the enclitic reflexive object.<sup>8</sup> Often the reflexive object is dropped without the verb becoming transitive.<sup>9</sup> In Russian at present the reflexive object follows the verb, but in the other languages, as formerly in Russian, it precedes.<sup>10</sup>

227. Verbs are distinguished as imperfective or perfective; the former being thought duratively in the process, or iteratively, the latter being thought in the accomplishment (213). Iterative verbs, which are regularly formed with the stem suffix *a*, may take a second *a* to form iteratives of iteratives, hiatus being of course prevented (204); when negated, iterative verbs not only express negation of the iteration, but not unfrequently a more emphatic negation of the simple verb, the negative affecting each instance in the iteration. Perfective verbs may be perfective of the momentary or of the durative, or of the iterative.<sup>11</sup>

<sup>1</sup> Miklosich, iv. p. 342.      <sup>2</sup> Ibid. iv. pp. 370, 495.

<sup>3</sup> Ibid. iv. p. 498.

<sup>4</sup> Ibid. iv. pp. 683, 688, 703, 726.

<sup>5</sup> Ibid. iv. p. 266.

<sup>6</sup> Ibid. iv. p. 270.

<sup>7</sup> Ibid. iv. p. 376.

<sup>8</sup> Ibid. iv. p. 500.

<sup>9</sup> Ibid. iv. pp. 264, 265.

<sup>10</sup> Ibid. iv. p. 271.

<sup>11</sup> Ibid. iv. pp. 274, 276, 279, 280.



Of most unprefixing verbs there are two forms, a perfective and a durative, or a durative and an iterative; of others there are three forms, perfective, durative, and iterative; of many there are four forms, perfectives of two kinds, a durative and an iterative, or a perfective, a durative, an iterative, and an iterative of an iterative. The difference is often unexpressed, being involved in different applications, for many forms are perfective or imperfective, according to difference of meaning; and many verbs can be used in the same meaning either perfectly or imperfectly. The same forms are often perfective or imperfective, according to difference of accentuation or quantity of vowels.<sup>1</sup>

If the perfective form of a verb has gone out of use it is replaced by the imperfective, and this goes out of use as such; and an imperfective gone out of use is supplied, an iterative by a durative, and a durative by an iterative. A simple iterative gone out of use as such is supplied by a double iterative, which serves also for a durative. A perfective is often got by giving a prefix to the durative form. A prefix gives either direction or perfectivity,<sup>2</sup> the prefix carrying the mind to the end of the process.

The iterative verbs of the fifth and sixth classes (213), generally become durative by getting a prefix,<sup>3</sup> the prefix having the effect of summing up the iteration into the duration expressed by final *a*; but many of them become perfective of iterative, especially with *na-*on, and *po-*, which expresses extension.<sup>4</sup>

228. In Old and New Slavonic, and in Upper and Lower Servian, the verb is dual when the subject denotes two things, whether they belong to each other or not. With two or more subjects in the singular the verb is respectively dual or plural. If a collective subject denotes persons or has taken the place of the plural, the verb is plural.<sup>5</sup>

229. The present tense of durative verbs is not unfrequently used with a future signification, to express the future more vividly.<sup>6</sup>

The strictly present is going on and is therefore durative; and a present perfective is present only in anticipation, as a future, or as what may come at any time.<sup>7</sup> If a past tense precede, a present perfective may be thought from the standpoint of the past; and in the later languages it is so used as historical present.<sup>8</sup>

In Russian the second plural person ending is sometimes added to the first plural of the present to refer the verb to the speaker and to several other persons, who are addressed as with a call for co-operation.<sup>9</sup>

The imperative (optative, 215) is sometimes used to express a supposition, concession, or condition; and its second person singular may be used when thought from the standpoint of a past tense preceding it to express a quickly passing fact generally thought as in past time, the subject of this fact being, as it were, commanded in the second

<sup>1</sup> Miklosich, iv. p. 280-282.

<sup>2</sup> Ibid. iv. p. 285-287.

<sup>3</sup> Ibid. iv. pp. 317, 332.

<sup>4</sup> Ibid. iv. p. 331.

<sup>5</sup> Ibid. iv. pp. 765, 766.

<sup>6</sup> Ibid. iv. p. 771.

<sup>7</sup> Ibid. iv. pp. 772, 776.

<sup>8</sup> Ibid. iv. p. 778.

<sup>9</sup> Ibid. iv. p. 781.

person singular to realise it. Such a fact is also expressed by the stem of many verbs, and thought in present, past, or future.<sup>1</sup>

The imperative is sometimes used in dependent clauses generally after a question, in which use it is rather an optative or potential than an imperative, *ὁ δὲ δῶσον? monstrabo vobis quem timeatis.*<sup>2</sup>

The past participles *bŭlo*, *bŭvalo*, of the verbs *bŭ* (Sans. *bŭ*), *bŭva* (durative), when connected with a present put it in the past.<sup>3</sup>

The present participle active has often a passive meaning, the action being thought as belonging adjectively to its object (167).<sup>4</sup> And there is a form in *-ste*, which Miklosich thinks might be a neuter accusative of this participle, which is used like a gerund (167).<sup>5</sup> The passive participle is often replaced by an adjective, the action of one thing on another being thought as qualifying the latter.<sup>6</sup>

230. In Slavonic that which the subject realises is more external than in Teutonic. Slavonic thinks the verb more in the external process of accomplishment, so that the subjectivity is carried to the end of the process in the perfective verbs; and doing or being as an end or aim in the infinitive retains its connection with the substantive which has it for an aim; whereas the infinitive has well nigh lost that connection in Teutonic (168). The infinitive is so verbal in Slavonic that it is contrary to the genius of the language to govern it with a preposition.<sup>7</sup> When the substantive to which the infinitive belongs in Slavonic is different from the subject of the principal verb, it is put, not in the accusative, as in Latin and Greek, but in the dative; the infinitive, according to Miklosich, depending on the verb and the dative on the infinitive.<sup>8</sup> This view of the construction of the infinitive leads Miklosich to deny that in Slavonic or Latin the infinitive can ever be really used as a nominative.<sup>9</sup> But we know that in English the infinitive, with *to* before it, can really be thought as a nominative to a verb, *e.g.*, *to die is gain*. The infinitive is not necessarily dependent on a principal verb, but may be abstracted as an aim attributed to a substantive expressed or understood, in which attribution thought passes from the infinitive to the substantive to which the aim is attributed. The latter, therefore, does depend on the infinitive through a sense of attribution, and in Slavonic is in the dative as that to which the attribution is made (73). That the infinitive does in this way govern the substantive to which it belongs is proved by the analogy of the verbal noun (see below), which plainly does govern its noun. The infinitive as an aim can express a wish, purpose, or command as well as an object of a verb or of a noun of action; and as a dative it can express a condition or circumstance in proximity to which a realisation takes place.<sup>10</sup> The infinitive active can take the place of a passive infinitive<sup>10</sup> (167).

The supine expresses in many of the Slavonic languages the direct object of verbs of motion.<sup>11</sup>

<sup>1</sup> Miklosich, iv. pp. 782, 794, 798.

<sup>4</sup> Ibid. iv. p. 821.

<sup>7</sup> Ibid. iv. p. 872.

<sup>10</sup> Ibid. iv. pp. 846, 849, 850, 852-861.

<sup>2</sup> Ibid. iv. p. 798.

<sup>5</sup> Ibid. iv. p. 828.

<sup>8</sup> Ibid. iv. p. 870.

<sup>11</sup> Ibid. iv. pp. 858, 874.

<sup>3</sup> Ibid. iv. p. 815.

<sup>6</sup> Ibid. iv. p. 17.

<sup>9</sup> Ibid. iv. p. 848.

A verbal substantive signifying the being or doing is formed from all verbs by adding *-iye* to the stem of the past passive participle, so that its stem ending is *-tiye*, *-eniye*. It is declined through all the cases of the singular number, and like the infinitive takes the subject of being or doing in the dative. Like the infinitive also, it may take the place of the passive, and in Old Slavonic it governs its object like the finite verb. It may be governed by a preposition, and is qualified by an adjective.<sup>1</sup>

## ARMENIAN.

**231.** The Armenian language has lived through three periods clearly distinguished from each other. The first extends to the beginning of the fifth century of the Christian era, and contained, according to later writers, a considerable number of literary works, mostly historical, of which only a few fragments remain. This first period had its alphabet, and a greater richness of forms than the subsequent period, but its articulations cannot be recovered. The second period reaches from the fifth to the twelfth century, and includes the classical writers of Armenia. It begins with the introduction of a new alphabet by Mesrob, arranged after the Greek, and founded principally on the letters of the first period. The third period begins with the twelfth century. It added to the alphabet two letters *ō* and *ʃ*, and varied considerably from the second period in pronunciation and in the use of the grammatical forms. It is the language of the second or classical period that will be studied here.<sup>2</sup>

**232.** The Armenian alphabet has eight *t*-consonants, of some of which it is difficult to distinguish the nature. Their utterance is thus represented, *t*, *ts*, *d*, *dz*, *tsh*, *dsh*, *dsh* analogous to *tsh* in form, and next but one after it in order; *ds*, *dsh*, *dsh* analogous to *ds* in form, and next but one after it in order. They may, perhaps, taken in this order, be regarded as *t*, *t'*, *d*, *d'*, *t*, *t'*, *d*, *d'*, though not properly distinguished as such in speaking. And then the Armenian alphabet would contain the following consonants: *k*, *k'* or *q'*, *g*, *g'*, *t*, *t'*, *d*, *d'*, *t*, *t'*, *d*, *d'*, *θ*, *p*, *p'*, *b*, *h*, *χ*, *γ* varying to *h*, *g*, *z*, *s*, *z*, *v*, *w*, *r*, *l*, *g*, *n*, *m*, to which in the third period of the language was added *ʃ*. The vowels are: *a*, *e*, *ē*, *ε*, *i*, *o*, *u* written *or*, and to these was added in the third period *ō*; in the beginning of a word *ō* is pronounced *wō*, and *ē* is pronounced *yē*. Two concurrent vowels preserve each its full value, except that *ē* before *a* is pronounced *y*, and there are the diphthongs *ai*, *ui*, *au*, and *iu*. At the beginning of a word or syllable *y* is pronounced *h*, and at the end of a word it lengthens *a* or *o* preceding it. The aspirate *g'* is etymologically akin to *l*, *r*. It takes the place of *λ* in the alphabet and in writing Greek words; but it is pronounced *gh*. It probably corresponded originally to the *l* of the Slavonic and Tartar languages (203). The modern Armenians pronounce *g*, *d*, *b*, as *k*, *t*, *p*, and *k*, *t*, *p*, as *g*, *d*, *b*; this looks as if they used for both an intermediate utterance which seems to transpose them; but Lepsius says that there

<sup>1</sup> Miklosich, iv. p. 877-880.

<sup>2</sup> Lauer, Gram. Arm., pp. 1, 2.

is an actual interchange of pronunciation. The accent is on the last syllable.<sup>1</sup>

233. There is no grammatical gender nor dual number.

The Armenian noun has the peculiarity that in the nominative, accusative, and vocative singular, the final vowel of the stem, if it end in a vowel, and if it end in a consonant the vowel preceding that consonant is dropped, and a similar tendency appears in those cases in the plural also. It is as if in the other cases the case relation strengthened the thought of the substance (Def. 4), referring rather to that part of the idea than to the whole, and consequently strengthened the stem ending which involved that element; while in the nominative, accusative, and vocative, the weak case relation and the substance tended to be absorbed into the substantive idea, and the stem ending to be weakened. The dropping of the vowel of the last syllable often renders necessary the insertion of a vowel, generally *i* or *u* before the consonant, which is then at the end, to facilitate its utterance. But also when there is already an *i* or *u* before that consonant, it is apt to be lengthened to *ī* or *uī*, in the aorist participle and other stems *ē* to *ēa*; which seems to indicate a strengthening of the residue of the stem by the absorption of the substance or case relation. Stems which end in *u* often when they drop *u* take *y* instead of it.

Some stems which end in *o*, *i*, or *u* change this vowel to *a* in the instrumental singular and in the oblique cases of the plural. This *a* is probably pronominal and arthritic (Def. 7), the instrumental relation being so strong as not to combine with these stems without its help, and the indefiniteness of the individuals in the plural rendering its help necessary with the strong oblique relations.

This view of the nature of this *a* is confirmed by the fact that the only stems which have *-a* in all the oblique cases, singular and plural, are proper names, and that even the female names formed with *-uhi* take *-a*, changing the *i* before *a* to *y*. Proper names are so concrete that they do not take up an element of relation so readily as common nouns (V. 60), and are therefore more apt to use an arthritic connective (Def. 7). But in other nouns also the vowel *i* or *u*, which is at the end of the fuller form of their stem, may be connective, and may by its addition weaken the vowel of the last syllable of the stem.

If a stem end in *o*, which is preceded by *y*, the *y* becomes *v*. The original stem ending was *-ya*, and this became *-vu*; but when the *u* is dropped or changed to *a* the *y* returns.

Of stems ending in a vowel, most of those which have a guttural or dental before the final vowel end in *i*.

The stems which end in a consonant end in *g'*, *g*, or *n*.

Stems which end in *g'* or *g* have in their full form *e* before the final consonant, those in *n* have *a* or *i*. Those in *-in* change it to *-an* in the instrumental singular and the oblique cases of the plural, the substantive idea being thought in these cases principally in its substance, and that part being consequently strengthened in expression. Some-

<sup>1</sup> Lauer, p. 3-6; Lepsius, Standard Alphabet, p. 132.

times final *n* is dropped after another consonant in the reduced stem.<sup>1</sup>

234. The nominative singular is the reduced stem; the nominative plural takes *-k'*, which is generally added immediately to the reduced form of the vocalic stems, but those which end in *u*, particularly those which in the reduced stem change *u* to *ɣ*, are apt to retain *u* in the nominative plural, and to insert *n* between *u* and *k'*. The nominative plural of stems which end in a consonant sometimes join *k'* immediately to the reduced stem, as all those in *-θivn* (*συν*), sometimes to the fuller stem, as all those in *-ɣ* or *-rn*. Many reduced stems in *-n* insert *u* before the *n* in the nominative plural for facility of utterance.<sup>2</sup>

The accusative singular is the same as nominative singular. The accusative plural differs from nominative plural only in taking *-s* instead of *-k'*. The accusative, when defined, is preceded by *z*, which is probably a demonstrative element; *z* is repeated before an adjective or genitive, which is connected with an accusative.<sup>3</sup>

The vocative singular and plural is the same as the nominative.<sup>3</sup>

The genitive singular is the fuller stem; but stems ending in *-o* or *-a* take *ɣ* (*h*), those in *-o* often take *-t'*. The genitive plural adds *-t'* to the fuller stem; and those *-u* stems which take *n* before *k'* in nominative plural retain the *n* in genitive plural.<sup>3</sup> Very seldom the genitive plural is formed from the reduced stem.<sup>4</sup>

The dative singular and plural is the same as the genitive. But some *u* stems form also a dative singular in *-um*.<sup>4</sup>

The ablative singular case ending is *-ē*, subjoined to the fuller stem; the *-ē* after *a* or *o* melts into *y*, or rather *h* as a mere lengthening of those vowels, but it absorbs into itself final *i*. Stems ending in *-ān* make ablative singular in *-enē*, dropping *a*, those in *-īn* make it in *-nē*, dropping *i*. Sometimes in the ablative singular stems ending in a vowel take *m* instead of their final vowel before *-ē*. Those *o* stems which form genitive singular in *-ot'*, sometimes in the ablative singular add *-ē* to this instead of to the fuller stem. The ablative always has *i* or *y* prefixed, which means *in*. The ablative plural differs from genitive plural only by this prefix.<sup>5</sup>

The instrumental case ending is *-v* added to the vowel stems, but absorbed by final *u* without lengthening it; *-b* added to the stems which end in a consonant and to some of those which end in *-u*, especially those which in the reduced stem take *ɣ* instead of *u*; *n* before *b* becomes *m*. The instrumental plural adds *-k'* to the instrumental singular; *-avk'* and *-ambk'* may become *-ōk'*.<sup>6</sup>

235. The adjectives are declined as the substantives. Many of them, however, especially polysyllabic ones, which have the form of reduced nominal stems ending in a consonant, are not declined.<sup>7</sup>

The comparative suffix of adjectives and adverbs is *-guin*, fuller form *-guni*, joined immediately to stems which end in a vowel, final *i* of stem being changed to *ē*; but when it is joined to stems ending

<sup>1</sup> Lauer, p. 8-13.

<sup>4</sup> Ibid. p. 16.

<sup>2</sup> Ibid. pp. 14, 81.

<sup>5</sup> Ibid. p. 17.

<sup>7</sup> Ibid. p. 25.

<sup>3</sup> Ibid. p. 15.

<sup>6</sup> Ibid. pp. 17, 18.

in a consonant, *a* is inserted between. If two or more adjectives are to be taken as in the comparative degree, generally only the first or the last has the suffix.<sup>1</sup> There is no superlative form.<sup>1</sup>

236. The cardinal numerals are : *min ej* 1, *erku* 2, *er* 3, *toys k'ar* 4, *hing* 5, *wet* 6, *erθu* 7, *uθ* 8, *inn* 9, *tasn* 10. They are inflected, the numerals 11 to 16 according to the *i* declension being formed with the unit before the ten without the copulative conjunction ; those for 17, 18, 19 have the copulative, and both their parts may be inflected. The multiples of 10 precede the units, and both may be inflected. The ordinals are *mi* 1st, *erkir* 2d, *erir* 3d ; 4th to 10th end in *-ord* (245), 11th to 19th in *-erord*.<sup>2</sup>

Multiplicative numerals are formed with *-patik*, sometimes with *kin*.

237. The following are the declensions of the pronouns :

		1st Pers.	2d Pers.	this.	this.	this.
SINGULAR.	Nominative . . .	<i>es</i>	<i>du</i>	<i>sa</i>	<i>ais</i>	<i>su'in</i>
	Accusative . . .	<i>zis</i>	<i>z'k'ez</i>	<i>z'sa</i>	<i>z'ais</i>	<i>z'su'in</i>
	Genitive . . .	<i>im</i>	<i>k'o</i>	<i>sar'a</i>	<i>aisr'</i> <i>aisor'ik</i>	<i>soj'in</i>
	Dative . . .	<i>ind</i>	<i>k'ez</i>	<i>sma</i> <i>sm'in</i>	<i>aism</i> <i>aism'ik</i>	<i>sm'in</i>
	Ablative . . .	<i>yin'on</i> <i>ind'on</i>	<i>ik'on</i>	<i>isman'e</i>	<i>yaisman'e</i>	not found
	Instrumental . .	<i>inev</i>	<i>k'ev</i>	<i>sorav</i>	<i>aisu</i> <i>aisw'ik</i>	<i>sow'in</i> <i>sow'imb</i>
PLURAL.	Nominative . . .	<i>mek'</i>	<i>duk'</i>	<i>sok'a</i> <i>sauk'</i>	<i>aisk'</i> <i>aisok'ik</i>	<i>sok'in</i>
	Accusative . . .	<i>z'mez</i>	<i>z'dez</i>	<i>z'sosa</i> <i>z'sais</i>	<i>z'ais</i> <i>z'aisos'ik</i>	<i>z'sos'in</i>
	Genitive . . .	<i>mez</i>	<i>der</i>	} <i>sof'a</i> {	} <i>aist', or</i> <i>aisot'ik</i> {	} <i>sof'un, or</i> <i>sof'unt'</i> <i>isot'unt'</i>
	Dative . . .	<i>mez</i>	<i>dez</i>			
	Ablative . . .	<i>im'on'</i>	<i>id'on'</i> <i>idez'on</i>	<i>isot'a'nē</i>	<i>yaist'</i> <i>yaist'a'nē</i>	
	Instrumental . .	<i>merk'</i> <i>m'ok'</i>	<i>devk'</i> <i>deavk'</i> <i>deok'</i>	<i>sok'ark'</i> <i>sok'ok'</i>	<i>aisok'ik'</i> <i>aisok'imbk'</i>	<i>sok'imbk'</i> <i>sok'umbk'</i>

The reflexive pronoun is *iv*, *ev*; genitive, dative, *ivyr*; ablative, *gyormē*; instrumental, *ivrev*. There is also a form with *n*, *irn*; singular: genitive, dative, *iryeon*; instrumental, *iryeamb*, *iryeav*; plural: nominative, *iryeank'*; genitive, dative, *irreant'*; instrumental, *irreambk'*. Like *sa* are declined *da* and *na*; like *ais*, *aid* and *ain*; like *suin*, *duin* and *muin*; *s* denotes the near, *d* the less remote, *n* the more remote. The two latter groups are declined also as ending in *-i*, by later writers as in *-u*, the *ui* of the last being changed by these to *u*. The elements marked separate are strengthening pronominal elements.

<sup>1</sup> Lauer, p. 26.

<sup>2</sup> Ibid. p. 27-30.

The elements *s*, *d*, *n*, are affixed as demonstrative particles to nouns and pronouns, also *a* and *k*. The genitive of the pronouns with *-o*, those in *a* with *-y* (*h*), form possessive adjectives.<sup>1</sup>

		Interrog.	Relative.	Indefinite.
SINGULAR.	Nominative . . . .	<i>o, ov</i>	<i>oŷ</i>	<i>ok'</i>
	Accusative . . . .	<i>zo, zow</i>	<i>zoŷ</i>	<i>zok'</i>
	Genitive . . . . .	<i>uiŷ</i>	<i>oŷui</i>	<i>uŷuk'</i>
	Dative . . . . .	<i>um</i>	<i>oŷum</i>	<i>umbk'</i>
	Ablative . . . . .	<i>yumē</i>	<i>yorūmē</i>	<i>yumek'e</i>
	Instrumental . . . .	...	<i>oŷow</i>	...
PLURAL.	Nominative . . . . .	<i>wik'</i>	<i>oŷk'</i>	...
	Accusative . . . . .	<i>zuis</i>	<i>zoŷs</i>	...
	Genitive . . . . .	<i>uit'</i>	<i>orot'</i>	...
	Dative . . . . .	<i>uit'</i>	<i>orot'</i>	...
	Ablative . . . . .	<i>yuit'</i>	<i>yorot'</i>	...
	Instrumental . . . .	...	<i>orowk'</i>	...

There is another interrogative pronoun rarely used, and only in the singular, nominative *i*, accusative *zi*, genitive *čŷ*, dative *im*, *him*, ablative *imē*, instrumental *iv*; also a third, *int* quid. There are also *ink'ean* ipse, *omn* aliquis, *ik'*, *inn*, *int*, aliquid.<sup>2</sup>

238. The Armenian verb forms a present stem by adding to the root *-e*, *-a*, *-u*, or *-i*, but sometimes the vowel of the present stem is not confined to it, but is radical. Sometimes the verb adds to the root in the present stem, *-ane* or *-ne*, *-ana* or *-ena*, *-nu*, *-at* *-ant* *-t* or *-nt*, adding to these last four *-e* or *-i*. The vowel *-i* is generally passive, though very many neuter and deponent verbs have it also; it is sometimes added in the passive to *u* of the present stem; it is used only in the present and the third singular imperfect.<sup>3</sup>

Besides the present and imperfect tenses formed from the present stem, there is an aorist and a future formed from the root.<sup>4</sup>

The stem of the aorist is formed by adding *-t'* to the root, immediately if it ends in a vowel, but if it do not, mediately, with a connective vowel, with *e* if the conjugational vowel is *e* or *i* (except *as* dicere, *git* scire, *kaŷ* posse, which take *a* though they are of the *e* conjugation), with *a* if this be the conjugational vowel, or with the *a* or *e* which precedes the *na* of denominatives.<sup>5</sup> Many verbs which form their present stem by adding *e* or *i* to the root, also *ta* dare and *ga* venire, all those which form it with *-u*, *-ne*, *-t*, *-nt*, and many which form it with *-nu*, make an aorist without *-t'*,<sup>6</sup> which may be called a second aorist, the other being first aorist; but the one verb forms only one aorist; though there is often, along with a first aorist, a participle of the second aorist.<sup>4</sup> In the second aorist the person endings are connected with the root by the same vowels as with *t'* in the first aorist.<sup>6</sup>

The augment *e-* is in the third singular of first aorist, and in the

<sup>1</sup> Lauer, p. 32-37.

<sup>4</sup> Ibid. p. 43.

<sup>2</sup> Ibid. pp. 37, 38.

<sup>5</sup> Ibid. pp. 48, 49.

<sup>3</sup> Ibid. pp. 41, 42.

<sup>6</sup> Ibid. p. 49.

imperfect *ēi*, also in the third singular of the second aorist, when this would be a monosyllable without it, and throughout the three second aorists *etu*, *eki*, and *edi*. Before *a* and *ō*, and sometimes before consonants, it becomes *ē*.<sup>1</sup>

The first future stem is formed by adding *-t'* to the stem of the first aorist, and the second future by adding *-t'* to the root, *i* being prefixed to *t'* in the first singular in the active, and *ai* in the passive, sometimes *eai* in second future passive. In the second plural first future *t'* before *ik'* becomes *t̄*.

In the other persons of the future *i* is not interposed except sometimes in second future, but the first *t'* of first future becomes *s* unless when it is preceded by a radical vowel.<sup>2</sup>

There is a subjunctive mood for the present and sometimes for the imperfect, and imperative and participles for present aorist and future.<sup>3</sup>

The person endings of the present indicative and subjunctive are singular *-m*, *-s*, —, plural, *-mek̄*, *-k̄*, *-n*.

In the other tenses and moods the *m* of the first person singular and plural is dropped except sometimes in the future. The *s* of second singular remains in the future indicative and future imperative; but in the latter it sometimes is changed to *γ*; it is dropped in the aorist imperative of the *e*, *a*, and *u* conjugations, also in the imperative of the first aorist in the *i* conjugation, though here it also becomes *γ*, as it always does in the imperative of the second aorist of the *i* conjugation; it becomes *γ* also in the imperative of the present, in the imperfect and in the aorist indicative. The endings *k̄* and *n* of second and third plural are maintained throughout. But besides *k̄* of second plural there is also found in the aorists of the *i* conjugation the ending *-γuk̄*.<sup>4</sup> The third singular of the passive aorists ends in *v*.<sup>5</sup>

In the third singular and second plural of the present the conjugational vowels *e* and *a* are lengthened to compensate for the dropped *t*.<sup>6</sup> In the third singular first aorist *e* before *t'* is increased to *ēa* or *ē*. If third singular of first or second aorist would end in two consonants, *i* is inserted between them for euphony.<sup>7</sup>

In the aorist, the person endings are connected with the stem by the following vowels for each person in the active, except the verbs *ta* and *ga*, which have no connective vowels; singular, first *i*, second *e*, third —; plural, first *a*, second *i* or *ē*, third *i*. In the passive, *a* is the connective for all the persons, lengthened in the first singular and second plural, and often in the second aorist preceded throughout by *e*. The passive formation of the aorist has very often an active signification, especially in the second aorist.<sup>8</sup>

In the future the connective vowels of the persons are: active, singular —, *e*, *ē*, plural *u*, *i*, *e*; passive, singular —, *i*, *i*, plural, *u*, *i*, *i*.<sup>9</sup>

In Armenian there is only one simple imperfect, that of the verb substantive, whose root is *e*. Its persons are *ēi*, *ēij*, *eγ*, *ēak̄*, *ēik̄*, *ēin*; the *γ* of third singular is radical and represents *s*. The imperfect

<sup>1</sup> Lauer, p. 50.<sup>2</sup> Ibid. pp. 51, 52.<sup>3</sup> Ibid. p. 44.<sup>4</sup> Ibid. pp. 45, 46.<sup>5</sup> Ibid. p. 48.<sup>6</sup> Ibid. p. 46.<sup>7</sup> Ibid. pp. 49, 50.<sup>8</sup> Ibid. pp. 47, 48, 50.<sup>9</sup> Ibid. p. 51.



of other verbs is formed by coalition of their present stem with this suffixed to it.<sup>1</sup>

The aorist participle with the present of the verb substantive expresses a perfect, with its imperfect a pluperfect, with its future a *futurum exactum*. The future participle with the same tenses forms a present, past, and future, inchoative. These compound tenses have both active and passive signification.<sup>2</sup>

239. The subjunctive is formed by subjoining -*t'* to the present stem, *e* becoming *i* before it, and *a* becoming *ai*. The vowels which connect the person endings with *t'*, are *e* lengthened to *ē* in third singular, for the *e* and *a* conjugations, *u* for the *u* conjugation, *i* for the *i* conjugation.<sup>3</sup>

The imperfect subjunctive, which is rare, is formed by coalition of the stem of the present subjunctive with the imperfect of the verb substantive *e*.<sup>4</sup>

A prohibitive imperative is formed in second singular and second plural by prefixing the negative *mī* to the present stem, and subjoining the person endings -*i* singular, -*k'* plural, *e* and *a* before *k'* becoming *ē* and *ai*.<sup>4</sup>

The present imperative is lost, and instead of it is used the aorist imperative, which has only the second singular and the second plural. It has the acute accent on its last syllable.<sup>4</sup>

The second singular imperative, first aorist active, has no person ending, and has also generally dropped *t'* and the vowel following it; *e* preceding becomes *ēa*, sometimes *ē*; monosyllabic imperatives of first aorist and second singular retain *t'*. Imperatives of first aorist of *u* conjugation consisting of two consonants insert *i* between them.

The second singular imperative first aorist passive either drops person ending and connective vowel, or these and also *t'*, increasing in both cases *e* before *t'* to *ēa*; or it subjoins -*iŕ* to *t'*.

The second singular imperative second aorist is in the active the root, in the passive the root with -*iŕ*. The second plural first and second aorist active and passive is same as the indicative.<sup>5</sup>

The imperative first and second future active and passive is same as indicative, but has the acute accent on the last syllable; but the second singular sometimes has -*iŕ*, before which *t'* becomes *t̄*.<sup>6</sup>

The infinitive subjoins -*l* to the conjugational vowel of the present stem.<sup>7</sup>

Participles are formed from the stems of the present and aorist by subjoining *oy'*, *ōy'*; the present stem drops the conjugational vowel. First and second aorist participles of both active and passive signification are formed by subjoining the participle of the verb substantive *e* to the stem of the first aorist or to the root.<sup>7</sup>

Participles of the future, with active and passive signification, are formed by subjoining to the infinitive -*ot'* or -*i*, the infinitive ending -*ul* dropping *u*, and -*il* becoming -*el*.<sup>7</sup> These seem to be compound.

A second passive is expressed for all verbs by the aorist participles with passive signification, and the auxiliary verb *linil fieri*.<sup>8</sup>

<sup>1</sup> Lauer, pp. 46, 47.

<sup>4</sup> Ibid. p. 54.

<sup>7</sup> Ibid. p. 56.

<sup>2</sup> Ibid. p. 53.

<sup>5</sup> Ibid. p. 55.

<sup>8</sup> Ibid. p. 57.

<sup>3</sup> Ibid. pp. 53, 54.

<sup>6</sup> Ibid. pp. 55, 56.

The verb *egjanil*, *γῑγνῆσθαι*, in its aorist and future supplies those parts of *el esse* as an auxiliary verb.<sup>1</sup>

240. The prepositions which are truly such and do not govern as nouns are few in Armenian.<sup>2</sup>

241. In the formation of nouns which denote natives of places, or members of sects, schools, parties, &c., the following suffixes are used: *ēay*, *ēan*, *ēantʻ*, *i*, *tʻi*, *ak*, *ki*, *uk*, *kʻ*, *aikʻ*, *ikʻ*, *ankʻ*, *kan*, *uni*; *tʻi* is the most frequent, generally with *a* prefixed to it, making the genitive in *-tʻui*, and declined as ending in *o*.

Suffixes of place of the object denoted by the root are: *stan*, *stani*, *otʻ*, *anotʻ*, *enotʻ*, *van*, *mni*, *ian*, *an*, *ēan*, *ak*, *ēak*, *i*, *ut*, *uḡd*.

Suffixes of plants which produce the object denoted by the root are: *eni*, *i*.

Suffixes of adjectives are as follows: of material, *egʻēn*, *i*; of moral disposition, *dʻan*, *zēt*, *zot*, *ṣot*; of form, *aḡd*, *ṣi*; of time, *ēay*, *ēan*, *kan*, *ain*, *aini*, *in*, *ayin*, *i*, *ē*, *oy*, *oyin*, *oḡi*, *oḡin*, *orēay*, *ornēay*; of privation, *at*, *ul*, *gay*, *zēt*.

Suffixes of diminutives: *ak*, *oik*, *uk*, *ek*, *ik*, *ēak*.

Suffixes of abstract nouns of action: *uθivn*, but when the root ends in *s* the suffix is *t*, when in *n* or *ṛ* it is *d*, the final *s*, *n*, or *ṛ* being also preceded by *u*; also *st*, *nn*, *adʻ*, *uadʻ*, *uadʻoy*, *an*, *un*, *uiθ*, *ōθ*, *ak*, *uk*, *uitʻ*, *utʻ*, *otʻ*, *kʻ*, *ikʻ*, &c.

Suffixes of nouns of the actor: *it*, *ut*, *ak*, *ēak*, *ik*, *uk*, *ku*, *kan*, *keḡ*, *an*, *ēay*, *adʻ*, *eḡim*, *oḡd*, *auḡ*, *nak*; of the instrument, *otʻ*, *it*, *oḡd*, *i*, *ik*, *ikʻ*, *ki*, *kikʻ*, *ai*, *aḡak*, *an*, *aḡan*, *anak*, *ēak*, *ak*, *uk*, *ek*, *kēn*, *ut*, *uil*, *uklak*; of person occupied about the thing denoted by the root, *pan*.<sup>3</sup>

Compound nouns are formed of two nominal stems connected by the copulative *ev* or *u*. Possessive and other compounds are formed of a noun preceded by a noun, pronoun, &c., which determines it or depends on it.<sup>4</sup>

242. Denominative verbal stems are formed by *-a*, *-e*, *-i* (not *-u*), *-ana*, *-ena*.<sup>5</sup>

Verbal stems are compounded with prepositions.<sup>5</sup>

Intransitive verbs become transitive, and transitives become causative by composition with *tʻutʻanel* ostendere, reddere, the verb preceding in its first aorist stem or in its root, and the first *tʻ* of *tʻutʻanel* being dropped. If the root of the verb ends in *l*, then *-utʻanel* when attached to it becomes *uzanel*. The root of *tʻutʻanel* is *tʻutʻ*.<sup>6</sup>

Two verbal stems are often joined in composition by *ev* copulative conjunction.<sup>7</sup>

243. There does not seem to be in Armenian any absorption of elements into the root such as in Sanskrit, Teutonic, Lithuanian, and Slavonic indicates a spreading quality of thought.

244. There is no determinate order for the arrangement of the parts of the sentence except that prepositions and conjunctions precede what depends on them.<sup>8</sup>

The adjective sometimes remains in the nominative singular, instead of taking the case and number of its substantive. Of several adjectives

<sup>1</sup> Lauer, p. 62.

<sup>2</sup> Ibid. p. 69.

<sup>3</sup> Ibid. p. 71-73.

<sup>4</sup> Ibid. pp. 73, 74.

<sup>5</sup> Ibid. p. 75.

<sup>6</sup> Ibid. pp. 75, 76.

<sup>7</sup> Ibid. p. 76.

<sup>8</sup> Ibid. p. 77.

tives belonging to a noun, all or some or none may take its case and number. Sometimes the adjective and not the substantive has the case and number.<sup>1</sup>

The numerals are attributes of their substantive; but there are the two following deviations from concord.

After the cardinal numbers above two the substantive is very apt to be in the ablative plural; often it is in the singular.<sup>2</sup>

The accusative prefix *z* is not repeated before a noun in apposition, nor is a preposition.<sup>3</sup>

A verb is plural when its subject is a noun of multitude, but a predicate may be singular with plural subject.<sup>3</sup>

The relative pronoun generally agrees with its antecedent in number, but very often it remains singular, especially if nominative or accusative, though the antecedent be plural. Sometimes the antecedent when a demonstrative pronoun is omitted, and the relative takes its case when it ought regularly to be in the accusative.<sup>4</sup>

The nominative is used absolutely where Latin uses the ablative and Greek the genitive,<sup>5</sup> but the genitive also is used absolutely, and may be identical with the subject.<sup>6</sup>

The instrumental expresses also the relation with.<sup>7</sup>

The future tense is also used with an optative or potential significance, subjunctively after *zi* in order that, or imperatively both with the negative and without it. In these senses also the subjunctive is used, as well as hypothetically and interrogatively.<sup>8</sup>

The noun which is connected with the infinitive like a subject may sometimes instead of being in the genitive be in the nominative, *i.e.*, in the reduced stem.<sup>9</sup>

The present and aorist participles are to be regarded as verbal adjectives.<sup>9</sup>

245. The Armenian language is doubtless a member of the Indo-European family, as may be seen in the formations of the stem of the verb, and in the person endings; but it is not easy to identify some of its forms with those of the other Indo-European languages.

The *t'* which occurs so frequently in the Armenian forms is deduced by Bopp from Sanskrit *y*, and the *k'* of the plural from Sanskrit *s*, though he admits that it is only in the grammatical endings that these correspondences can be shown.<sup>10</sup> He argues with great force that in the Armenian subjunctive *t'* corresponds to *y* in the Sanskrit potential.<sup>11</sup> The use and meaning, however, of the Armenian subjunctive correspond to the Zend subjunctive rather than to the Zend and Sanskrit potential (52, 244). And in order to maintain the correspondence between Armenian *t'* and Sanskrit *y*, he has to deduce the Armenian aorist from the Sanskrit causative formation,<sup>12</sup> and the genitive plural from the dative plural.<sup>13</sup> The former is rather daring, and even the latter does not seem to be correct. For it appears rather that the genitive took the place of the dative, the latter still remaining in the singular in

<sup>1</sup> Lauer, pp. 77, 78.

<sup>2</sup> Ibid. pp. 78, 79.

<sup>3</sup> Ibid. p. 79.

<sup>4</sup> Ibid. pp. 79, 80.

<sup>5</sup> Ibid. p. 80.

<sup>6</sup> Ibid. p. 84.

<sup>7</sup> Ibid. p. 87.

<sup>8</sup> Ibid. pp. 92, 93.

<sup>9</sup> Ibid. p. 95.

<sup>10</sup> Bopp, *Vergl. Gram.*, sect. 216.

<sup>11</sup> Ibid. i. p. 371.

<sup>12</sup> Ibid. i. p. 373.

<sup>13</sup> Ibid. i. p. 425.

those *u* stems which form their dative in *-um*. This is plainly in correspondence with the Indo-European dative ending, whose original *ū* readily becomes *m* (143, 184, 209), and it is very arbitrary to deduce it as Bopp does from the pronominal element. But if it is the genitive which has encroached on the dative, then the *t'* which is in both in the plural, as well as the *t'* which some strong *o* stems have in the singular, probably came from *s* (plural *sām*) rather than from *y*. This is confirmed by the numeral for 6 *wet'*, whose *w* Bopp accounts for by comparison with Zend *kṛvas*, without noticing that the *t'* of the former should correspond to *s* of the latter.<sup>1</sup> If this be the true correspondence then the formative element of the aorist and future corresponds in Armenian to the *s* of the other languages, and the subjunctive formation is a slightly varied application of the same element, the conjugation vowel tending to be weakened before it with an infusion of *i* as from a reminiscence of the old potential.

But then, on the other hand, *k'* seems to correspond to *s*, not only in the plural of the noun and pronoun, but also in the person endings of the verb. Now *s* is not the only Indo-European plural ending. Masculine pronouns in Sanskrit, and the original *a* stems in Greek and Latin, prefer *i*. The distinction of gender having been given up in Armenian, the masculine forms tended to prevail,<sup>2</sup> for the masculine is the simple noun, the feminine is the special form which is called forth by the sense of gender; and the prevalence of one form for the plural in nouns and pronouns would lead to its adoption in the person endings also. The original Indo-European plural ending was probably *syas* or *yas* (9), having close affinity with the ending *iyans* of the comparative of adjectives; and *y*, from which came the plural ending *i*, is near akin to the gutturals. Accordingly the comparative ending in Armenian is *guin*, *guni*, which Bopp connects with Sanskrit *guna*,<sup>3</sup> an element of kindred meaning indeed, and applied to express *-plex*, *-fold* (Armenian *-kin*), but never used to express the comparative degree. It seems more probable that *g* of the comparative and *k'* of the plural both came from *y* or *i* by a hardening of the utterance, which would fall in with Armenian phonetic habits. For Armenian is remarkable for its distinction of hard and soft utterances, which is one of the causes of the fulness of its alphabet; and this distinction tends to make the hard utterances harder, and the soft ones softer, each being relieved from the associations of the other (97). An element used sometimes where it had a stress of meaning, and at other times in a weaker sense, tends to divide in such a language into distinct utterances. Thus the original *y* of the ending of the genitive singular (9) is represented in Armenian by *y*. And the *s*, which in the forms above mentioned is represented by *t'*, remains in the accusative plural, and becomes *r* in the genitive of the pronouns, often in the second singular person ending, and in the third singular imperfect of the verb substantive, where it corresponds to radical *s*.

The *k'* of the second personal pronoun Bopp rightly deduces from *v*, or rather *w*.<sup>4</sup>

<sup>1</sup> Bopp, ii. p. 74.

<sup>2</sup> Ibid. i. p. 471.

<sup>3</sup> Ibid. ii. pp. 52, 53.

<sup>4</sup> Ibid. ii. p. 108.

The *v* or *b* of the instrumental corresponds to *ḡ* in Skr. *ḡis*.

The ablative tends to be formed on the dative, expressing from proximity; its *ē* corresponds to Sanskrit *-at*, being lengthened by dropping *t*.

The declension of the pronouns is strengthened with additional pronominal elements, but the *m* which occurs in their dative and ablative seems to belong rather to the dative ending than to *sma*.

The *ḡ* of the first person dative singular probably comes from *y* (*ḡyam*).

The future, which is represented as formed on the first aorist by the addition of another *t'*, is in truth the Indo-European formation with *sy*, the *y* being assimilated by the *s* and both hardened to *t'*. In the first singular the double letter is divided by *i*, expressive of a sense of the active subjectivity of self, and by *ai*, expressive of the passive; in the other persons the first *t'* is apt to become *s* (238). Those verbs which express the past without *t'* express the future with a single *t'*.

The *-l* of the infinitive Bopp deduces from *n*, and *-j* of the participle from *-la*<sup>1</sup> (214).

The ordinal suffix *-ord* may possibly be akin to Sanskrit *kṛt* in *sakṛt* semel, and in *-kṛtvās*, the suffix of numeral adverbs (Gr. *-κις*).

The suffix *-ejoyd* of ordinals of 11 to 19 is formed on the genitive ending *ej* (237); compare 13.

## BASK.

1. There yet remains to be studied the Bask language, which is European, but not Indo-European, and possesses a special interest of its own as a specimen of the languages spoken in Europe before it was overrun by the great conquering races of the Indo-European family. Bask is still spoken on both sides of the Western Pyrenees, in Biscay, Guipuzcoa, Alava, and Upper Navarre on the Spanish side, and in Lower Navarre, Labour, and Soule on the French side; only, however, in the country, and by the lower orders of the people.<sup>2</sup> But the poorest Bask workman regards himself as equal in point of nobility to the richest estated lord.<sup>3</sup>

2. The Bask phonesis is vocalic, and wanting in versatility.

It has *k, k', g, t, t', d, p, p', ḡ, f, h, y, s, z, š, l, r, j, l, n, m*. By the grammarian Gèze *k'* is represented by *kh*; *t* by *tt*; *t'* by *tch*; *t'* by *x*; *p'* by *ph*; *ḡ* by *b*, which he says has a sound intermediate between *b* and *v*; *s* by *ch*, pronounced as in French; *z* by *s*, which he says has a special sound approaching the French *ch*, and in some words a soft sound approaching French *j*; *š* and *z* by *z*, which, he says, has generally the sound of French *c* before *e* or *i*, but in a small number of words the sound of French *z*; *l* by *ll*; *n* by *ñ*. He says that *j* between vowels is scarcely uttered, and he gives in his alphabet *rr*, to be sounded as in French.

<sup>1</sup> Bopp, Vergl. Gram., iii. pp. 148, 309.

<sup>2</sup> Adelung, Mithridates, ii. p. 12.

<sup>3</sup> Ibid. ii. p. 11.

Van Eys says that there are two *r*'s, a hard and a soft, and that *f* is not properly a Bask letter.

The Bask vowels are *a*, *e*, *i*, *o*, *u*, and they combine in *ai*, *oi*, *au*, *eu*, *ia*, in which combinations each of the vowels is fully sounded.<sup>1</sup>

The unsatiable character of Bask utterance is shown by the wide prevalence of euphonic change. Thus final *k*, when followed by a suffix, is changed into *t* or *y* or dropped. Final *h* becomes *k*. Initial *h*, when preceded by an agglutinated element, becomes *k* or *y*, or is dropped. *N* before a labial becomes *m*; *s* before *s* becomes *t*. *R*, as in the Asiatic nomadic languages, never begins a word, from want of supple utterance.

Medials become *tenuis* after sibilants, *r*, or vowels; *tenuis* become medials after *l*, *m*, *n*.<sup>2</sup> Hiatus is avoided by insertion of *r* between the vowels, which do not coalesce, but *e* and *u* before *a* or *e* are apt to form *ia*, *ie*.

The vocalic character of Bask appears from the fulness of the utterance of the diphthongs and the limitations of the concurrent consonants. Thus *t* is dropped before *k*, *n* before *k*, *l*, *r*, *t*.<sup>2</sup>

3. There is no distinction of gender. The noun forms a plural only when it has the definite article, which is the suffix *-a*. To this the mark of the plural is subjoined, and is *k*.

The noun has case endings and takes postpositions. The following, somewhat differently named, are given as the case endings in the Souletin dialect.<sup>3</sup>

The stem serves for subject to an intransitive verb, and also for accusative and vocative; *-k* denotes the agent whether as subject of an active transitive verb, or as Latin ablative governed by a passive verb.<sup>4</sup>

The possessive ending is *-en*, in which *n* is perhaps a pronominal arthritic element (7); the genitive *-ko*; the partitive *-ik*.

The dative endings are *-i* to, *-ra* or *-la* movement towards, *-rat* or *lat* movement to completed; locative *-n*; ablative *-tik* from; instrumental *-s* (instrument, material, or condition).

With *-ik* the noun is thought generally; the meaning being (like French *de*) some in affirmative propositions, none in negative. When the noun is thought indefinitely, or in the plural, which is an indefinite conception, *-ko* and *-tik*, which express of and from, *-ra* and *-rat*, which express motion to, and *-n*, which expresses situation, require before them a pronominal element *ta* to complete the thought of them with that of an object, whereof, wherefrom, whereto, or whereon; this is supplied for *-ko* and *-tik* by the noun itself when taken definitely; but *-n*, *-ra*, and *-rat*, when attached to a definite noun, take before them a weaker element *ia*, and in all these cases the absence of *ta* defines the noun by rendering necessary a defined idea of it, and there is no need of the article.<sup>5</sup>

The language is unfavourable to concurrent consonants, and tends to avoid such concurrences by insertion of *e* or by dropping one of the consonants; *-tik* with *-ta* before it becomes *tarik* euphonically, because

<sup>1</sup> Gèze, Gram. Basque, pp. 2, 3; Van Eys, p. 3.

<sup>2</sup> Van Eys, pp. 3, 4.

<sup>3</sup> Gèze, p. 7-10.

<sup>4</sup> Van Eys, p. 45.

<sup>5</sup> Gèze, p. 12-18.

*tatik* would be too hard an utterance. Hiatus also is avoided by insertion of *r*. In the plural *-ak* is dropped, except in the stem form of nominative, accusative, and vocative, and *e* accented is taken instead; and in the dative, instead of *-éi*, which would involve a hiatus, the ending is *-r*.<sup>1</sup>

Proper nouns, also common nouns taken in a special sense, and generally infinitives, differ in their declension from common nouns which have not the article, in that the element *ta* is used with them only in the locative case, and there only with the names of persons.<sup>2</sup> They are so definite that they dispense with *ta* except in the locative, which involves the strongest sense of place, and with names of persons, which are less readily thought in that sense.

The genitive in *-en* precedes the noun which governs it; as also does the noun with any other ending which determines another noun; if there are several nouns in the same case, they may all or only the last take the ending; subject, verb, and object may take any order.<sup>3</sup>

When a substantive is preceded by a possessive pronoun, and when it is in apposition to another substantive, it takes the article.<sup>4</sup>

4. There are many postpositions subjoined to various cases of the noun. Those of them which govern the accusative, and are therefore subjoined to the stem, are scarcely to be distinguished from case endings.

One of the case endings given above, namely *tako*, is also used as a postposition governing the genitive in *-en* like a noun, with the meaning for; *ta* expressing, as a pronoun, the attention directed to the reason or origin in or belonging to the genitive, to which the governing word is related (*ko*). Those postpositions which govern the genitive in *-en* have the nature of nouns rather than of pure elements of relation. But there are postpositions which govern datives, and others which govern the accusative or stem of the noun.

The ending *-ko* may be subjoined to any case forming an adjective, which may be itself declined.<sup>5</sup>

5. When a substantive is qualified by an adjective, only one of them, the last in order, takes the case ending; but with the adjective *oro* all, the substantive, though it precedes, may take the case ending.

The qualifying adjective follows the noun; and if there are several, the last only takes the case ending. The predicative adjective follows the subject, and is followed by the copula; but in negative propositions it follows the copula.<sup>6</sup>

The comparative degree of adjectives is formed with *-ago*; the superlative with *-en*. These are used also with adverbs and with nouns, giving the latter an adjectival or adverbial meaning.<sup>7</sup>

The following suffixes are used with the stems of substantives and adjectives, *-to* small, *-t'ar* contemptible, *-sar* poor, *-egi* too, *-se*, *-segi*, a little too.<sup>8</sup>

6. The cardinal numerals are: 1 *bāt*, 2 *bi*, *biga*, 3 *hirour*, 4 *laur*, 5 *bost*, 6 *zéi*, 7 *saspi*, 8 *sòrtsi*, 9 *bederatsu*, 10 *hamar*.

<sup>1</sup> Gèze, p. 12-18.

<sup>2</sup> Ibid. pp. 21, 24, 26.

<sup>3</sup> Ibid. pp. 10, 25.

<sup>4</sup> Ibid. p. 24.

<sup>5</sup> Ibid. pp. 29, 30.

<sup>6</sup> Ibid. p. 33-36.

<sup>7</sup> Ibid. p. 38-41.

<sup>8</sup> Ibid. p. 55.

The ordinals are formed with *-gerren* ; and ordinal adverbs (firstly, &c.), with the compound element *-korik* subjoined, *-gerrenekorik*. There are also such numeral words as *hirouretan* three times, *hirournatan* chacun trois fois, *hirourna* chacun trois, *hirournaka* trois à trois. The cardinals except the first, and the ordinals precede the substantive that they refer to. And 2, when it has a substantive, is *bi*, when alone it is *biga*. When several ordinals refer to the same substantive, the last only need take *-gerren*.<sup>1</sup>

7. There are three demonstrative pronouns, denoting the near, the less near, and the remote. These are respectively, in the nominative and accusative singular, *hau*, *hori*, *houra* ; their stems in the oblique cases are *houn*, *hor*, *har*. They are declined, as well as the other pronouns, like nouns which have not the article ; but they have the plural, of which the stems are *hoy*, *hori*, and *hay* or *h*, except that the nominative accusative plural of *houra* is *hourak* ; they form the instrumental both with *-s* and *-ʼas*.<sup>2</sup>

There is a full supply of the various kinds of pronouns.<sup>3</sup>

The personal pronouns are, first, *ni* singular, *gu* plural ; second, *hi* singular, *zu* respectful, *ziek* plural.

Their possessive genitives are respectively *ene*, *gure*, *hire*, *zure*, *zien*, which may take *-a* to express *le mien*, &c., and they form the instrumental with *-ʼas*. The third personal pronoun is expressed by the demonstratives ; the third personal reflexive is *bera*, sometimes more strongly *bere buria*, his own head, the first singular reflexive *nihaur*, second singular reflexive *gihaur*, second plural and respectful reflexive *zihaur*.<sup>4</sup>

The relative pronoun is *nur*, declined like the other pronouns with instrumental in *-ʼas* ; likewise *zun* which, *ker* what.<sup>5</sup> The genitives *nurentako*, *zumentako*, suggest that the genitive ending *-en* is perhaps arthritic (Def. 7).

The personal pronouns are rarely expressed separate from the verb.<sup>6</sup>

8. The great peculiarity of the Bask language is the way in which the verb is expressed. There are in truth at present no verbs in the language except two or three auxiliary verbs and nine or ten irregular verbs.<sup>7</sup> And all ideas of verbal realisation are, as a rule, expressed by the auxiliaries in connection with a verbal noun which expresses what the verbal stem signifies in other languages. It is to the auxiliary only that the elements of person, tense, and mood are attached ; and the elements of person are taken not only for the subject, but also for the object, direct and indirect.

There are three tenses, present, past, and future. The past is expressed by putting *n* before the stem of the auxiliary, and by subjoining *n* to its entire formation. The future subjoins to the stem of the auxiliary *-teke*, or *-ke*, when there is no personal object, *-ke* when there is.

By prefixing *n* to the stem when the subject is first or second

<sup>1</sup> Gèze, p. 43-46.

<sup>2</sup> Ibid. pp. 48, 49.

<sup>3</sup> Ibid. pp. 52, 53, 66.

<sup>4</sup> Ibid. pp. 57-59, 62.

<sup>5</sup> Ibid. p. 64.

<sup>6</sup> Ibid. p. 56.

<sup>7</sup> Ibid. p. 213-238 ; Van Eys, p. 32-44.



person, by taking *li-* for the third person, the future becomes the conditional; and the conditional, by subjoining *n* to its entire formation, becomes conditional past in the first or second personal subject, but in the third it also changes *l-* to *z-*.

For intransitive verbs the auxiliary is *iza* or *za* be, for transitive it is *uk'*, or rather *u*, have. And to these, modified as above, the elements of person are attached.<sup>1</sup>

9. The person elements constitute the most striking feature of the Bask verb.

The auxiliary for intransitive verbs takes a person element not only for the subject, but also for the indirect object; and the auxiliary for transitive verbs takes a person element not only for the subject, but also one for the direct object, and another for the indirect. The person elements of the object, however, are not taken when the object is the same as the subject; for the idea of the verb then becomes reflexive, and is expressed with a separate reflexive element (7). Nor is there, except in the conditional, any subject element of third person singular along with object elements, not even without them in the past tense. But when the subject is third person plural, a plural element follows the auxiliary stem for intransitives, and is at the end of the auxiliary formation for transitives. The order of the person elements with the auxiliary verb differs for these two classes. For intransitive verbs it is subject, verb, indirect object; for transitive verbs it is direct object, verb, indirect object, subject; but in the past and conditional the subject goes first when the direct object is third person, the element of third person object being then absorbed by *n* or *l*. As with the intransitive, the plural element of third person subject follows the verbal stem; so with the transitives does the plural element of third person direct object. It is to be observed, however, that an element of the first or second person as direct object cannot be combined in the one formation with person elements of indirect object, but the pronouns have to be separated.<sup>2</sup>

A substantive being thought as plural only when it has the definite article, it is only then also that it can be represented as object by a plural person element.<sup>2</sup> If a substantive expressed be indirect object, it may or may not be represented by a person element in the auxiliary formation.<sup>3</sup> The person elements of first and second person, whether as subject or object, are: first singular, *n* before the verb, *t* after it; second singular, *h* familiar, *z* respectful; first plural, *gu*, *g*; second plural, *zie*, *z*. The third person singular, whether subject or direct object, is *l* in the indicative, *l* in the conditional; as indirect object it is *o*. There is an element of plurality for all the persons, *de* or *e*, besides *ie* also for the second.

In the combinations of these elements with the stems of the auxiliaries there is often abridgment and euphonic change, the consonants being weak in Bask compared with the vowels. Thus in the past, *d-* of third person subject becomes *z* in absorbing the *n* of that tense.

<sup>1</sup> Gèze, pp. 70, 82-204.

<sup>2</sup> Ibid. p. 80.

<sup>3</sup> Ibid. p. 81.

The auxiliary *iza*, *za*, with an indirect object subjoins *i*, and when preceded at the same time by a subject person element has its *z* changed to *t'*, so as to become *it'ai*, *t'ai*. The auxiliary *u* with an indirect object becomes *ei*, which may be contracted to *i*.

10. An optative mood is formed from the conditional by dropping *-teke*, *-ke*, and prefixing *ai-*, and a hypothetical by dropping *-teke*, *-ke*, and prefixing *ba-*.

The imperative for intransitives subjoins *di* to the auxiliary stem *iza* when there is no object, *ki* when there is; and prefixes the person element of subject, that of the third person being *be*, the root of the reflexive pronoun. Van Eys deduces it from the auxiliary *edi*.

The imperative for transitives is formed without *di* or *ki* from the auxiliary *eza* may.

There are also further modifications of the verbal idea expressed by the conjugated auxiliaries *eza* may, *eroa* move, *edi* can.<sup>1</sup> Moreover, by subjoining *n* or *la* to an auxiliary, like that of the imperative, a subjunctive is formed governed by the conjunction that, which with *-n* is less positive than with *-la*,<sup>2</sup> because *la* more strongly expresses the thought of an object to which there is movement. The particle *bei* prefixed to an auxiliary formation makes it coincident with a principal fact.<sup>3</sup>

11. But there is yet another element which enters into the formation of the auxiliary with first or third person for subject when it is not dependent on a principal verb, nor interrogative, and when it is a single person who is addressed.<sup>4</sup> Under these conditions the auxiliary takes a vocative element for the person addressed, which is either *zu* to express respect, or, if familiar, is *k* for a man, *n* for a woman. The *u* of *zu* has an assimilating influence on the preceding vowels of the formation, and there is apt to be a similar infection with *k* and *n* as if they too originally had *u*. When the subject or object is second singular it excludes a vocative element; but if it precedes, it is *z* when respectful, *h* when familiar; if it follows, it is *zu* when respectful, and when familiar it is *k* for a man, *n* for a woman. The vocative elements come last in the auxiliary formation, except that they are followed by the person element of the subject when it does not precede the stem of the auxiliary, and by the *n* of the past.

A verb is negated by prefixing to the auxiliary formation the negative particle *ez*; and more strongly by using *ez* separately before the verb itself.<sup>5</sup>

12. The auxiliary formation, made up as above, is preceded by the locative case of the infinitive of the verb, the infinitive being a substantive formed generally with *-t'e* added to the verbal stem, or by the past participle, which is differently formed by different verbs, or by the partitive or other genitive case of the latter, or by the verbal stem itself. But when the verb is optative or negative or emphatic the auxiliary precedes.<sup>5</sup>

The verbal stem is used in the imperative and the potential, in

<sup>1</sup> Van Eys, p. 38-43.

<sup>2</sup> Ibid. p. 48.

<sup>3</sup> Gèze, p. 74.

<sup>4</sup> Ibid. p. 77.

<sup>5</sup> Ibid. p. 206.

the subjunctive present, past, and future, and in the future of the other ideal moods, the verb having least actuality in these parts. Some verbs also use it for a present whose process has ceased. Where the verb is thought in its process, the locative of the infinitive is used; and where it is thought in its completion, the participle. When the completion is thought indefinitely, as less defined by the subject directing it, the participle is put in the partitive case. Accordingly, this case is used when the sense is passive; and with it the auxiliary does not take a person element of the indirect object. When the completion is thought more definitely and in the future, the participle is put in either the possessive or the genitive case, with present or future auxiliary.<sup>1</sup>

Thus *eskent'en ditikiozugu*, we will offer them to him, sir; *eskent* · infn. loc. it have pl. fut. to him respectful we offer  
*te · n*, in offering; *d · i · ti · ki · o · zu · gu*, we will have them to him, sir.

Interrogation is sometimes expressed by subjoining to the auxiliary formation *a*, before which final *u* becomes *i*, final *a* is accented or changed to *e* with *y* after it, and final *e* takes *y* after it.<sup>2</sup>

13. By subjoining the pronominal element *n* to the auxiliary formation, a noun is formed which expresses the thought of a person or thing as defined by a relative clause,<sup>3</sup> or of the verb thought substantively as a fact.<sup>4</sup>

Substantives, adjectives, and adverbs, of any case or form, may take the formative suffixes of the infinitive or participle and be used with the auxiliaries as verbs.<sup>5</sup> There is, moreover, a considerable number of derivative suffixes of nouns and roots expressing inclination, fitness, habit, abundance, possession.<sup>6</sup>

It may be observed that in the case endings of the noun and in the tense elements of the verb, *k* expresses a sense of outgrowth, and to this also corresponds *y* in the comparative element of adjectives.

14. Examples : (1.) *Gizun ikusi d · u · d'an · a · k hori egin*  
 it has man seen him have I rel. art. agent that done I agent  
*d · u*, the man whom I have seen has done that.<sup>3</sup> (2.) *Ni · k*  
 know infn. loc. 3d per. obj. have I rel. woman virtuous super. art. 3d sing. is  
*ezaqu · te · n d · u · d'an emaste bertutus · en · a d · a*,  
 she is the most virtuous woman that I know.<sup>7</sup> (3.) *Hil · es unsa*  
 remember thou be churchyard art. in enter infn. art. loc. thee as adj. 4  
*orhit h · a · di ilherri · a · n sar · ti · a · n hi nola · ko*  
 3d per. be pl. case ending alive 3d per. be pl. past time art. loc. dem. pl. like  
*z · irade · la biki z · irade · n arti · a · n he · k bezala*  
 die need it have thou masc. and not know moment art. prayer do 2dsing. masc.  
*hil behar d · u · k eta ez zakin ordu · a othoy egi · k*  
 God art. to it have to thee that pardon art.  
*Zeinko · a · ri d · ei · k · en bark'amendurğa*, remember well, on  
 entering the churchyard, that they were like thee when they were

<sup>1</sup> Gèze, p. 197-205.<sup>2</sup> Ibid. p. 207.<sup>3</sup> Ibid. p. 74.<sup>4</sup> Ibid. p. 244.<sup>5</sup> Ibid. p. 249.<sup>6</sup> Ibid. pp. 255, 256.<sup>7</sup> Ibid. p. 246.

alive. Thou must die like them, and without knowing the moment. Pray God that he may pardon thee;<sup>1</sup> *hiles* is the material (3); moment art. loc. sign make 3d per. be to him pl. past he poss. father to (4.) *Ordu · a · n keinu egin z · iez · o · te · n har · en aita · ri* how wish it have cond. rel. he named he be subj. that *nola nahi l · u · ke · n hura dei l · edi · n*, then they made signs to his father how he would have him named;<sup>2</sup> in *luken*, *l* is third person subject-object (9), and *n* is relative to *nola*; in *ledin*, *l* is third person subject, and *n* is the conjunction (10).

Except as stated in 3, 5 and 12, there is complete freedom of arrangement of the members of a sentence in Bask.<sup>3</sup>

Bask is an agglutinative language.

It does not seem to differ in respect of quickness or slowness of the movement of thought from the mean of Indo-European languages. For the verbal auxiliary combinations do not, on the one hand, consist of fragments, but of verbs and pronouns; and, on the other hand, the degree in which the elements maintain their identity in various combinations, subject for the most part only to euphonic change, shows how they are singled out by the mind and only partially joined on one to another, as thought passes through them.

## CONCLUSION.

From this review it appears that when the languages of mankind are studied with reference to the magnitude of the parts into which they break up thought, that is, the extent of the thought or largeness of the view which is present at once to the mind of the speaker, differences of structure come to view which are so characteristic as to furnish a natural classification of them. Now the classes into which the languages of the world are thus grouped are remarkable for their geographical distinctness, and for the largeness of the areas to which they belong: the African, except where affected by Asiatic influence; the American, north and south; the Oceanic and Indian; the Northern Asiatic and Northern European; the Mid-Asiatic; the Indo-European. The only indistinctness in the classes corresponds to the geographical indistinctness of Arabia. For as Arabia is as much a part of Africa as a part of Asia, its influence on the quarter of Africa adjacent to it has moved the native languages of that quarter out of the African group and caused them to approximate in respect of the magnitude of the object of simultaneous thought to the Oceanic and Indian group.

Now, the prevalence of a mental characteristic over a large area when, like North and South America, it includes great diversities of climate and production, indicates a cause lying deep in the nature of man, as it is unaffected by those diversities.

When we turn to the mental character of the various races we see such a characteristic varying from one quarter of the globe to another in exact correspondence with the above-named feature of language.

<sup>1</sup> Van Eys, p. 49.

<sup>2</sup> Ibid. p. 51.

<sup>3</sup> Gèze, p. 10.

That characteristic is the quickness and mobility of thought varying to slowness and persistence, and it belongs not only to thought but to action, being seated not only in the brain, but in the nervous system generally.

It has been shown deductively, in Book I., chap. i., how it were to be expected that such differences in the movement of thought should affect language. And now the effects there deduced have been traced through language in corresponding variation. Not only has it been traced from one great group to another, but within the same family where the movement of thought has varied from race to race, the corresponding variation has been traced in their respective languages. Attention has already been drawn to this fact in the Chinese group, and in the Syro-Arabian family, as the latter is found in Asia and Africa (V. 38, 171). But nowhere does it come out more clearly than in the Indo-European family, especially when Teutonic thought and speech are compared with Celtic (see VI. 173).

The Indo-European races have a movement of thought quicker than that of the Syro-Arabian or Chinese (chap. i., Part I., Sect. VI.), and it is interesting to observe how the comparative slowness of the Teuton brings with it an approximation in his language to the latter groups. This has been already noted in the vowel changes of the Teutonic verb, but it may further be observed that in English the loss of formative elements under the disturbing influence of French has brought out the Teutonic strength of the root in a monosyllabic form, which has a resemblance to Chinese; so that it is possible to compose in English a long popular address, quite suitable for any audience, which shall consist altogether of monosyllables.

None of the Indo-European languages show a tendency to disyllabic roots such as is found in Malay and Polynesian, for they all abstract and generalise too much to satisfy the conditions of Book I., chap. i., 7.

And in general the concomitant variations of what have been connected as cause and effect in the deductive theory prove inductively that they are connected as such in fact, and the exact correspondence of the facts with the theory proves the latter as laid down in Book I., chap. i.

## CHAPTER II.

MENTAL POWER CONNECTED WITH UNIFICATION OF THE ELEMENTS  
OF LANGUAGE, SUBJECTIVITY OF THE VERB, AND DEVELOP-  
MENT OF GRAMMATICAL GENDER.

1. It is a patent fact in the history of mankind, that in mental productiveness the Indo-European and Syro-Arabian races have surpassed all other races of men. Nor has this distinction come slowly to them as if by gradual improvement of their faculties, but as soon as the establishment of civil order made room for the growth of intellectual products, these came forth freely, exhibiting mental power unsurpassed in later times. Wherever indeed civil order has been established, and the organisation of a populous society has produced division of labour, and assigned to distinct organs the functions necessary for the general welfare,—there art has been developed, and a certain amount of intellectual production has come into view. And it may be difficult, and require learning which few possess, to estimate the degree of mental power which has been exhibited in the productions of China, of aboriginal India, of Egypt, of Mexico, and of Peru. Yet of all of them it may be said with confidence that in point of productive originality they bear no comparison with the products of the Indo-European and Syro-Arabian races. The individual works of these two families are more charged with thought. In the fields of mental production which they cultivated as suited to their genius, their works have a fulness of suggestion which shows how full of associated elements their ideas were.

2. Now in correspondence with this superiority of mental power possessed by the Indo-European and Syro-Arabian races, is that feature in their languages, the unification of elements, which in Book I., chap. ii., 2, has been pointed out as a natural effect of mental power. The agreement of these two families of language in this respect is the more striking on account of their great unlikeness in other respects; while the races themselves agree only in the corresponding feature of having high intellectual endowments.

The unification of elements in the Indo-European languages has led to their being distinguished as inflectional from other languages which are monosyllabic or agglutinative. The Syro-Arabian languages also are classed by Max Müller as inflectional; and he explains the term as denoting those languages in which the various elements which enter into the composition of words are welded together and coalesce;

while in the monosyllabic languages they lie apart as separate roots, and in the agglutinative they are felt as distinct, though fastened one to another. The Aryan words, he says, seem made of one piece, the Turanian words show the sutures and fissures as of bad mosaic.<sup>1</sup>

The term inflection itself implies this unity of the word; for it signifies that the grammatical accidents are thought as changes in the form of the one word, rather than as ingredients making up different combinations. And if this fusion of formative elements in the unity of the word constitute them inflections, the Indo-European and the Syro-Arabian languages stand apart from all others as inflectional languages.

"In the Aryan languages," says Max Müller, "the modifications of words comprised under declension and conjugation were likewise originally expressed by agglutination. But the component parts began soon to coalesce so as to form one integral word."<sup>2</sup> And it may be added that in the most ancient languages of this family, though the constituent elements of the word may be distinguished, the unity of the word is complete.

Still more striking is the unification of elements in the Syro-Arabian languages in their pure original structure. For the absorption of grammatical accidents into the body of the word as changes of its vowels not only combines those accidents in absolute union with the root, but gives the same unity to the whole combination of subject, reflex object, and derived verb which those vowel changes affect (see V. 48). And though the peculiar singleness of the expression belongs to the last chapter, the number of elements which are unified in that single form brings it into this, as an instance of the fulness of the thoughts which come from high mental power. Mind of the medium degree of quickness tends to embrace in one integer of thought the most closely associated elements, but it needs high mental power to include so many.

Now in no other language is there a unification of elements at all comparable to that which characterises these two families. In some languages the elements lie apart; in others they are more or less agglutinated; but in none are they fused together in so complete a union.

What, then, is there in mental or bodily nature or habit, or in condition of life, which may account for this peculiarity of language, and which is common to the Indo-European and Syro-Arabian races while it is absent from all other races of men? Nothing but a superiority of mental power.

3. Another feature in language which has been deduced in Book I., chap. ii., 3. as naturally increased by superior mental power, is the sense of the subject in the verb. It is in this that the realisation resides which it is the essential function of the verb to express (Def. 11); and it is the absence of this from the other parts of speech that constitutes the difference between them and the verb. Now in all

<sup>1</sup> Max Müller, *Lectures on the Science of Language*, 1st series, Lect. viii. pp. 331, 336, 371.

<sup>2</sup> Ibid. Lect. viii. p. 336.

the other languages which have been studied in this book the distinction between the verb and the other parts of speech is weak compared with that which is found in the Indo-European and Syro-Arabian languages ; and the verb has a subjectivity in these languages which is not to be found elsewhere (see *Gram. Sketches*, V. 53, VI. 16, and the numbers in the table of contents which notice this feature in the various languages).

Owing to this subjectivity going through the verb in the intellectual languages, they did not admit a negative element in the verb between the person and the stem, which is to be found in so many other languages. The realisation in the subject is too positive a conception with these races to admit of their thinking the realisation of a negative. In negation as thought by them the fact must first be thought positively and then affected with the negative. In many other languages the negation, because it affects the realisation, enters into it and inheres as a verb in a subject, so as not only to produce negative forms of the verb, but also, where the verbal stem is easily detached, to make a separate verb of the negative (*Gram. Sk.*, I. 33 ; IV. 90, 109, 134, 144, 151, 162). But this cannot be done in languages whose verb has a strong sense of its realisation in the subject.

4. Equally striking is the sense of grammatical gender in these two families of language. For though gender is developed in Egyptian, Bari, Galla, and Hottentot, in no other language noticed in this book is it to be found outside the Indo-European and Syro-Arabian families. Its development throughout these two confirms the theory of Book I., chap. ii., 4, that mental power tends to promote it ; but its presence in the above-mentioned four languages shows that this is not its only source.



## CHAPTER III.

THE FEATURES OF LANGUAGE WHICH ACCOMPANY THE HABITS OF  
THOUGHT WHEREIN THE RACE HAS BECOME ADAPTED TO THE  
REGION.

*Introduction : Pursuit, Search, and Production.*

1. BEFORE we proceed to trace in the various languages the effects of those mental aptitudes which have fitted the various races to prevail each in a mode of life suited to its region, it may be well to take a brief survey of the principal forms of activity by which man supplies his wants, as it will be found that amongst the mental aptitudes which affect language there are certain variations which are to be referred to such varieties in the direction of practical effort. Those forms of activity are determined by the resources of the region ; and they may be briefly stated as pursuit, search, and production.

2. In regions well stocked with animals which man may capture and which are fit for food, he is naturally a hunter, and lives by pursuit of his game. This is the case in both North and South America ; and most parts of Africa also are supplied with animals on which man might live.

In regions which are poorly stocked with animals, man will seek his sustenance in the spontaneous products of the soil, and will live by searching for what may supply his wants. Such regions are to be found in Australia and in the islands of the Pacific, whose poverty in animals useful to man is one of their most striking characteristics. To these are to be added the lowlands of the south-east of Asia, for with the density of population which seems naturally to belong to these regions (vol. i. pp. 77, 78), any supply of animals would quickly be exhausted, and man would be reduced to live on the products of the soil. Certainly nothing is more remarkable in the Chinese character than their sharpness in finding what they may turn to useful account. Indeed, this one aptitude seems to govern all their activity. For so imitative are they, that their arts may be regarded as derived in the main from direct observation, so that productive action and process are found by them in the same way of eager search as they find the spontaneous gifts of nature.

In regions which supply things useful to man, but not sufficient for his wants, he must live by increasing their supply, and the aim of his activity will be production. Such regions are the plains inhabited by the nomad races, and the highlands to which the Indo-European family owes its origin.

3. Now it is to be observed that in each of these three groups there are exceptional regions in which, owing to their nature, the prevalent form of activity is less strongly marked, and some in which one form is blended with another. In North America, the Eskimo is still a hunter, though the mammalia which he pursues inhabit the sea; for it is by a veritable pursuit that he captures them. But those American races which live by fishing are engaged rather in search than in pursuit. And those which dwelt amidst the exuberant fertility of the lands adjacent to the Mississippi might be led to find what they wanted ready to their hand, or adopting the obvious suggestions of its natural growth to increase its supply by using means to produce it. Still more might production be followed in the mountain regions, where animals were few and spontaneous produce scanty. But on the dry tableland of Mexico production was difficult and search was needed.

In Africa there is a still greater mixture of the fundamental forms of activity. In the fertile valley of the Lower Nile and on its delta there is comparatively little room for animals which man might capture for his use; and the fertility of the land irrigated by the inundations yields a supply almost spontaneous for the few wants of life, so that man might live there mainly by an agriculture needing no art. In the tropical regions of Africa, though animals are abundant, the produce of the soil is so plentiful that man is in a great degree spared the fatigue of hunting by the facility of search. And in the less fertile regions of South Africa, a similar advantage is gained by combining production with pursuit.

That quarter of the world south-east of Asia, where men seem to live by search, includes regions little known, to which apparently the Melanesian races belong, and to which probably they owe their character. In those regions it would seem, from the indications of the languages, that more care was needed in the guidance of action and more attention to the lessons of experience than was necessary in the other Oceanic regions. In them, therefore, the mental aptitudes for search were tempered by a tendency to generalise their experience of nature and of life.

The regions also to which in the main production belongs, in the form of pastoral industry, reach into those in which, owing to their Arctic climate, production becomes so difficult that it has to be helped by pursuit and search. And some of those which are now occupied by the productive Indo-European seem originally to have favoured similar combinations of activity.

These mixed forms of life may be discerned in language in the mixture of the effects which belong to the three fundamental varieties; but these must first be understood in their leading outlines.

4. Pursuit thinks objects as they are in themselves, rather than as means and conditions, and has a sense of difficulty in making them amenable to its purpose, so that the ideas of them do not fall readily into the correlations of action and fact. Search thinks objects as they are, without the sense of difficulty in use; but in proportion to the carefulness which it requires it strengthens the effort of observa-

tion, and gives a concrete fulness of particularity to ideas. A life of eager search involves also in a fully peopled region a tendency to mutual collisions amongst those who are seeking each his own advantage. And these are so detrimental that an effort to avoid them by mutual conciliation is a necessary condition of success, which will give an advantage to a race, and fit it to prevail in the region. An habitual inclination therefore to make such an effort is an aptitude proper to such a life in such a region, and cannot fail to show itself in language in the prevalent use of respectful expressions.

Action itself, too, is thought differently, according as it is directed by these different aims.

Pursuit has its object in its eye; and the action involves a sense of the object. Search directs action to the object without involving in the action such a sense of the object. Production directs action not to an object, but to a combination of objects, means, and conditions, and it is such a combination that productive action contemplates. And these varieties in the thought of objects and actions, arising respectively from the life of pursuit, of search, and of production, are accompanied by corresponding varieties in the construction of the noun and the verb.

### I.—*The development of the subject, and the power of self-direction of the life.*

1. The distinct expression of the subject as such, or, in other words, the development of the nominative case of the substantive, is hardly to be found outside the Indo-European languages. For though Arabic has a nominative case, it is a weak sense of the subject that is expressed in the Arabic nominative (Gram. Sk., V. 60); and in none other of the Syro-Arabian languages is it to be found (*ibid.* 83, 107, 143, 153, 166) except in Ethiopic in four old nouns which retain a trace of it (*ibid.* 132).

There are, indeed, the following instances, in other languages, of affixes taken by nouns when they are related as nominative to a verb, but on examination none of them are found to be true nominative elements expressing the relation of subject.

In Eskimo the substantive takes *-p* when it is the subject of a transitive verb with a direct object; but this is the genitive ending, and shows that the verb, having incorporated the person of its object, is thought as in a genitive relation with its subject, rather than as realised subjectively in it. When the verb is intransitive, the substantive, which is its subject, is in the stem form (*ibid.* II. 14). So, in Samoiede, the suffixes which express the persons of the verb are the possessive suffixes when the verb is transitive and has taken up a sense of its object; otherwise they are subjective suffixes (*ibid.* IV. 76).

In Choctaw the element *t* refers to a noun, connecting it with a sentence as subject, but it is also used as a copulative conjunction, and is in fact a connective element (*ibid.* II. 48).

In Australian (Adelaide), in Tibetan, and in Selish (North America), the subject of an active verb takes the ablative or instrumental ending (Gram. Sk., II. 64; III. 83, 90, Ex. 2, 4, 5, 13; V. 37), a striking proof of the weak sense of the subject.

And a similar peculiarity is found in Bask, in which the substantive with *-k* subjoined is nominative to an active verb, and ablative governed by a passive verb (*ibid.* Bask, 3).

In Galla the nominative takes *-n* or *-ni*; but this is also taken by the instrumental and in other relations. And in Kanuri the nominative takes *-yē*; but this same suffix is sometimes taken by the direct object, and sometimes followed by postpositions which govern the noun. In both these languages these suffixes seem to be pronominal; they are plainly not subjective (*ibid.* III. 162, 173); and the same is to be said of *-nem* in Yakama (II. 56). The pronoun *θī* is in the same way used after the nominative in Burmese (*ibid.* V. 24), and in Mongolian a pronominal element demonstrative of the subject is attached to the nominative, and to other cases (IV. 36).

2. Now, the exclusive possession of a true nominative with a subject element by the Indo-European and Syro-Arabian languages in their original form, naturally connects itself with the high subjectivity of the verb in these two families, which in the last chapter was attributed to the superior mental power of those races. And no doubt the strong sense in the verb of its realisation in the subject must have tended to produce in the subject a strong sense of its being the realiser of the verb. But how is it that in the Syro-Arabian languages, in which the subjectivity of the verb is so strong, the sense of subject in the nominative is so weak? Now a similar weakness affects in these languages the distinctive expression of the other cases, and indicates a weakness of interest in the relations of substantive objects. And this corresponds to the Syro-Arabian development in history, which was rather spiritual than material. In truth, the nature of the region made it so. For in the desert there were not external objects to attend to, and in the oases there was little scope for material production (Book II., chap. i., Part I., Sect. V., 5). The race which was fitted to prevail in such a region was one which would dispense with much of the material interests of life, not being able to promote them on account of the difficulty of the region. And with such a race its own experience of life was so little under the control of its will, that it could have little sense of self as governing the life. On the other hand, the Indo-European races, the inventors of art and explorers of nature, began from the first, where their breed was pure, to subdue the world to their purposes, and to govern the conditions of their life. And thus we find that the efficacy of self-directing originality in determining the course of life, which in the inferior races is low for want of mental power, and in the Syro-Arabian races small on account of the restrictions of the region, reaches its maximum in the Indo-European races, while the original development of the nominative accompanies it in corresponding variations according to the theory of Book I., chap. iii., 1.

II.—*The nominative tends to follow the verb, if the race has little habit of deliberation and choice.*

1. In the natural order of thought the subject precedes the verb (Def. 23). But in the Polynesian and Tagala (Gram. Sk., III. 53) languages, the nominative as a rule follows the verb more or less closely. In Tagala, if the verb is active, the subject following it is followed by the object. In Polynesian the qualifying, the directive, and the locative adverbs come between the verb and the subject, and the object follows the latter (ibid. 9); but in Tongan the subject is somewhat less bound to follow the verb than in Hawaiian, Maori, or Tahitian, and in Samoan still less bound to do so (ibid. 13, 16, 3).

In Fijian the ordinary arrangement is verb, object, subject, but the more subjective personal pronouns precede the verb (ibid. 17); and this also is the order in the language of Annatom (ibid. 21), the most southern of the New Hebrides. But in the other Melanesian languages it is different. In Maré, Duauru, and Bauro, the subject generally precedes the verbal element and verbal stem (ibid. 34, 40, 41); in Lifu it generally follows (ibid. 37); in Mahaga it may precede or follow (ibid. 42); in Erromango and Tana, in Sesake as a rule, in Ambrym and Vunmarama, it precedes (ibid. 24, 26, 28, 31, 32).

In Australian (Adelaide) there is great freedom of arrangement, but the conditions and object tend to go before the verb, the subject either preceding or following it (ibid. 87). In Malay generally the subject precedes the verb (ibid. 77).

2. In Old Egyptian the subject generally followed the verb, sometimes with the object between; but in the later language it seems to have had a greater liberty to precede, and there was greater use of personal suffixes combined with detached verbal elements (ibid. 124).

In Kafir the subject may either precede or follow the verb; it may come last in the sentence; it generally follows the detached verbal particle *ti*. When a conjunction precedes, the subject generally goes before the verb. The direct object generally follows the verb, but it often precedes it (ibid. I. 13). In the other African languages the subject generally is before the verb.

3. In the American languages the following are the displacements of the subject from before the verb:

In Cree the ordinary arrangement is object, verb, subject; then the rest in the natural order (ibid. II. 38).

In Selish and in Maya the subject sometimes, perhaps generally, follows the verb (ibid. 64, 99); the object intervening in Selish.

In Mexican the subject seems to tend to follow the verb, though sometimes the order is subject, verb, object (ibid. 88).

In Caraib the subject follows the verb (ibid. 104, 3, 4).

In Quichua the order is object, verb, subject (ibid. 114).

In Kiriri the verb usually stands before the subject (ibid. 128).

In Chikito the grammarian gives no information on this point, but three or four examples occur in which the subject follows the verb.<sup>1</sup> In Bauro there are similar examples of its following,<sup>2</sup> but also others of its preceding.<sup>3</sup>

In Chilian, the subject may be placed before or after the verb (ibid. 143).

The subject ordinarily goes before the verb in Eskimo (ibid. 16), in Dakota (ibid. 43), in Choctaw (ibid. 53), in Yakama (ibid. 56), in Pima (ibid. 73), in Otomi (ibid. 82), in Chiapaneca (ibid. 90), in Guarani (ibid. 119). Its place in the other American languages is not stated.

In Otomi, when a personal pronoun is subject, it is taken up as a suffix by the verb in a reduced form, having been already partly expressed in the personal prefix of tense and being weakened as subject thereby.

4. In the languages of Central and Northern Asia and Northern Europe, and in the Dravidian languages of India, the subject, as a rule, precedes the verb, but in Hungarian there is great freedom of arrangement (ibid. IV. 121); and in Sirianian the nominative sometimes follows the verb; but this may be due to the verb being preceded by a conjunction (ibid. 146, 5), and may not be the normal order.

The rule in the Chinese group of languages is that the subject precedes (ibid. V. 8, 18, 29, 37, 47).

5. In Arabic and Ethiopic the normal order is verb, subject, object, but in Hebrew and Syriac the subject seems to have more tendency to take the lead. In all there is great freedom of arrangement, especially in Ethiopic, perhaps partly owing to the Greek literary influence to which Ethiopic was subject (ibid. 72, 95, 117, 139). In Amharic and Haussa the nominative precedes the verb (ibid. 148, 170); in Tamachek it follows (ibid. 164).

6. In Sanskrit the verb is usually, though not always, last in the sentence (ibid. VI. 42).

In Greek and Latin also, though there is great freedom of arrangement, the normal order is subject, conditions, object, verb (ibid. 88).

In Irish the order is verb, subject, object, conditions, and if the verb be the copula it is followed by the predicate; if the copula be not expressed, the predicate goes first. Sometimes the object goes before the subject (ibid. 129). In Welsh the verb or predicate takes the lead, the predicate being followed by the verb substantive, or by the verbs equivalent to *nominari*, *eligi*, &c.; but negative and interrogative and some other particles if they precede cause the verb substantive to go before the predicate; the other members are arranged as in Irish (ibid. 130). In Anglo-Saxon the order was subject, object, verb, the verb being last; but this was liable to be changed by emphasis or by the strength given to a member of the sentence by a relation in which the sentence stands and which specially affects that member. In Anglo-Saxon, however, the subject held its precedence more strongly than it does in New High German (ibid. 172). In

<sup>1</sup> Arte, p. 59-61.<sup>2</sup> Ibid. pp. 68, 96.<sup>3</sup> Ibid. p. 70.

Lithuanian the subject precedes the verb (*ibid.* 196), and in Slavonic. In Armenian there is no rule (*ibid.* 244). In Bask, subject, verb, and object may take any order (*ibid.* Bask, 3).

7. Now it appears from this review that the more careful races tend to leave the subject in its natural place before the verb, meaning by the subject, the substantive or pronoun, which as a separate word is nominative to the verb. Such are the nomad races of Central and Northern Asia and Northern Europe, the Dravidians, the Chinese group of races, the Malay, and the Indo-European, except the Celtic, who all give careful attention to production or to search. The hunting races of America, who give no heed to industry, and have game without careful search, tend to place the subject after the verb. The Hungarian, who was both nomad and hunter, places it before or after. The Polynesian and Tagala agree with the American hunter in this respect, that nature supplies their wants with little care on their part; and with them the subject follows the verb. Hunting indeed requires attention. But when the game is present the pursuit is suggested without deliberation. And where there is plenty of game the life of the hunter, like that of the Polynesian and the native of the Philippine Islands, is not guided by thought and deliberation, as the necessity for these is dispensed with by the bounty of nature. Where production or search receives attention, choice of ways and means is needed. The general fact, therefore, seems to be that the absence of thoughtful choice and deliberation characterises the races which put the subject after the verb, while habits of more deliberate action characterise those which leave it before the verb.

8. Now, when thus analysed, the presence of the mental habit as condition of the linguistic fact may be traced even in those cases which seem to be exceptions.

The Melanesian islanders are perhaps as well supplied by nature as the Polynesians. But they are akin to the dark races of Borneo, New Guinea, and Australia, who amid the difficulties of the interior of those countries had to exercise more care to gain their subsistence. The Fijian is intermediate between the Polynesian and the Melanesian. The Kafir has more game, and is more of a hunter than the industrial trafficking Negro; so that the latter leaves the subject before the verb, while the Kafir often puts the subject after the verb, his industrial development being at the same time such as leads him often to put it before the verb. The Hottentot, as a nomad following, however indolently, an industrial life, leaves the subject in its natural position; as also does the Galla, whose original life was nomadic. The Australian has no industry, but he has to search for his subsistence, and in his speech the place of the subject is indeterminate.

The Egyptian in the fertility of Egypt could live without care. His industry was the fruit of civil organisation; for the great works of Egypt could be accomplished only by the organisation of combined labour under the direction of strong authority. And the native character of the Egyptian corresponding to an easy life in a fertile region, appears in the original position of the subject after the verb.

The industry of the Peruvians also, and of the Mexicans, like that of the Egyptians, bears the impress of civil organisation, and sprang from this source rather than from native tendency. And as they were originally American hunters, they placed their subject like the others. The Chilians, however, lived in a lower temperature than the Peruvians, and therefore probably in a region where subsistence was more difficult and required more care; and they placed the subject sometimes before and sometimes after the verb.

The Eskimo in his frozen region could not subsist without a careful outlook for what he needs, and careful adaptation of means for its attainment. And the timid and agricultural Guarani of Brazil is of necessity careful and deliberate. And both these races place the subject before the verb.

The prairies and fertile lands on which dwell the Dakota or Sioux and the Choctaw races, rendered unnecessary the ardour for the chase which was required where the means of subsistence were less abundant, and drew the attention of those races towards agriculture. So that the Sioux, though they could take buffaloes at will, not only lived partly on wild oats,<sup>1</sup> but also cultivated large tracts of land;<sup>2</sup> and the Choctaws were quite agricultural in their tendencies (Gram. Sk., II. 47). The Yakama, who lived by catching fish in the season and storing them for future use, exercise a certain degree of careful search in providing for their subsistence, and are exempt from the habits of the hunter's life. And all these races show the weakness of the hunting impulse by leaving the subject in its natural place before the verb.

Of the native condition of the Pima, the Otomi, and the Chiapaneca, information is wanting.

9. There is little room for industry in Arabia, and what the Arab gets at all, he gets without care in the fertile oases. He accordingly places the subject after the verb. This, too, is the normal tendency in Tamachek, and in a less degree in Ethiopic. But Amharic was altered in this respect, probably by Galla influence, and Haussa by Negro influence.

The Hebrew, dwelling outside the desert, and the Syrian still more so, had more industry, and with them the subject tended more to hold its natural place.

The Greek and the Latin exercised the choice and deliberation involved in inventive industry, but they were sufficiently masters of the conditions of their life to be free also to follow impulse, so that they readily thought the verb as undetermined by the subject, and could put the subject after it as well as before it, when emphasis or the course of thought strengthened it into an independent conception.

The Tenton had more of deliberate purpose in the selection of his ends, and with him the subject had stronger precedence.

But it is most striking that the Celt alone of Indo-Europeans put the subject as a rule after the verb, and that he, perhaps owing to the favourable nature of his region, is naturally the least devoted to

<sup>1</sup> Charlevoix's *Letters from Canada*, &c., p. 110; Keating's *Narrative*, p. 395.

<sup>2</sup> Prichard's *Researches*, vol. v. p. 410.



industry or subject to care. This is a remarkable confirmation of what results from this entire review, that where action is guided habitually with deliberation and choice the subject retains its natural position before the verb; where action is habitually more impulsive the subject tends to follow the verb.

And this is the theoretical deduction of Book I., chap. iii., 2.

III.—*The sense of the personality of the subject in the verb is proportional to the guidance of action by self-directing volition in the mode of life to which the race has been adapted.*

1. The difference between the proper subjective person in the verb, and the nominative which is subject to the verb, is, that the person is part of the verb, expressing a sense of the inner life or subjectivity of the subject in which the fact is realised, while the nominative is distinct from the verb, and expresses the subject thought as the seat of that inner life or subjectivity. This difference of meaning, however, between the two is not always perfectly maintained. The person, in expressing the inner life of the subject, often suggests the subject itself with sufficient strength to dispense with the separate expression of the subject. And often the subject when expressed separately suggests sufficiently its own inner life in the verb, so as to dispense with the expression of the person. But when there is at the same time the subject separate from the verb, and the subjective person element corresponding to it in the verb, the difference between the two is that which has been stated.

The person element, however, in the verb is sometimes not truly subjective, but possessive. In that case the verb is not thought properly as realised in the person, but rather as an emanation from the person, or a possession acquired by the person; and the realisation is more or less outside the person, abstracted from it and involved in the act or state itself. The person then as possessive partakes of the nature of a predicate, the rest of the verb being subject and copula, as if, instead of saying, I loved, we were to say, Mine was the loving. That the verb should take this form, in which the person is the same as when possessive of a noun, and in which its meaning approaches to this construction, it is evident that the person must be thought with very weak subjectivity.

Another evidence of weak subjectivity of the person is when the same person elements which are used in the verb are used also in participial forms. For these involve no subjective realisation (Def. 13), and the sense of this must be weak in the verb when it prompts no expression proper to itself.

2. It is remarkable that generally in the Polynesian, Tagala, and Malay languages there is no person element in the verb, and in Polynesian the elements which express the succession of being or doing are sometimes not assertive, but only participial. So also it is in the Melanesian Loyalty Islands, in Maré, and Lifu (Gram. Sk., III. 6, 34, 37, 46, 53, 76).

In Dayak the three personal possessive suffixes, which may be plural in their personality as well as singular, may also be suffixed as the person singular or plural of the most subjective verbs, such as those which mean to know, to see, to say, to find (*ibid.* 74); and also in Australian (Adelaide), and in the languages of the New Hebrides and of other Melanesian islands, person elements appear in the verbs (*ibid.* 21, 24, 28, 31, 42, 44, 84). In none of these languages has the verbal stem enough sense of the subject to be specialised as verbal (*ibid.* 5, 17, 3; 21, 37, 41, 46, 75).

Now, while in the Polynesian and Philippine islands by the favour of nature the conditions of life are such that man realises his ends with little self-directing thoughtfulness of action, and on the ocean he trusts himself in proportion to his boldness to the guidance of external indications (this chap. IV. 1), the dark race acts with more care (this chap., *Intro.* 3; II. 8). And the use of the person in the verb corresponds to the self-directing volition in action. As one race mixes with another, it partially takes up the characteristics of that other.

The care which the Malay exercises, whether as a fisherman or on the land, is care in search; and it consists in watching and following external indications. Once he has chosen his action, his guidance in performing it is not from within, but from without; and except in Borneo, where he is affected by the dark race, he has no person elements, as he has little self-directing volition.

3. Throughout the Chinese group of languages also there is an absence of person elements from the verb (*Gram. Sk.*, V. 4, 13, 18, 27, 36, 45), and of any sense of subjectivity from the verbal stem, as well as a strange deficiency of personal pronouns, which strikingly corresponds to the absence of spiritual subjective elements from the mental habits of those races, and to the utterly material character of their development and civilisation. These races have been referred to in the last section as careful; and therefore as habitually exercising a sufficient degree of deliberation and choice to maintain the nominative in its natural place before the verb. But though this much must be necessarily involved in the careful adoption of useful actions, how little there is of self-directing volition in carrying out those actions in China may be seen from the following testimony:

"A firm purpose of abiding by everything once acknowledged as useful and proper is the leading feature of Chinese industry. The nation excels in that which is to be effected in the beaten track, but it is wretchedly deficient in everything that requires thought and judgment."<sup>1</sup>

"Determined unwearied industry remedies all defects" (of division of labour and of machinery and implements).<sup>2</sup> "There is an instinctive propensity for work."<sup>3</sup> "All articles, the making of which requires more than mere mechanical skill, are beyond Chinese ingenuity." "Whenever they have a very good pattern, the natives of Canton will

<sup>1</sup> Gutzlaff's China, vol. ii. p. 2.<sup>2</sup> *Ibid.* p. 3.<sup>3</sup> *Ibid.* p. 4.

endeavour to imitate it, but they attempt nothing further.”<sup>1</sup> “The minute work and finish of all their industry is remarkable.”<sup>2</sup>

This gives a full and clear idea of the nature of the industry of the Chinese; and the other races of this group partake of the same character. The intense devotion of the Chinese to industry implies a keen outlook for profitable modes of employment. And this involves, in a proportional degree, choice and deliberation. But the course of work once entered on is guided by an external rule. And when the mode of carrying it on has been learned, it proceeds thenceforward by habit. Even before it has been learned, the volition of adopting an external rule dispenses with volition in the process of following it, the copying of each step coming by suggestion from the rule. An industrial life of this kind is occupied by such processes of imitation or by processes of routine which have become habitual, and are carried on by mere association. In the habitual process, the end to be attained being kept in view, the stage which the operation has reached suggests the next step, or the end itself suggests all or many of the successive steps of the process of attainment; and in both the habitual and the imitative the attention is given up to the external process, and to the end at which it aims, or to the end as the principal object. With such thought of external objects and external aims the Chinese are quite engrossed, without either martial enterprise or industrial originality to call into play self-directing volition. And the absence of this from their life corresponds to the absence of person elements and of subjectivity from their verb.

4. The nomad races of Central and Northern Asia follow an industry which, though it requires care in ordering it according to its conditions, is in its details a traditional routine, but whose necessary condition has often to be secured by vigilant enterprise, which affects the habits of life. For though the care of flocks and herds follows old methods, the acquisition and the continued possession of the requisite range of pastures demands determined energy in proportion to the severity of the struggle for possession. Now the pasture-grounds of Asia are distinguished by their natural conditions into three principal divisions.

Mongolia is the most elevated region of the high plain of Eastern Asia,<sup>3</sup> and as it includes the great wilderness of Gobi, in parts of which are wide plains affording pasture in summer,<sup>4</sup> the pastures are more scattered as well as less productive than in the other two divisions. These are the comparatively fertile region of the Turkish or Tartar race to the west of Mongolia, and the less fertile region of the Tungusian race to the east and north of it. One fragment, however, of the former race, the Yakuts, has got separated from the remainder, and dwell in the extreme north. Now the struggle for pasture must be less keen, and life must have less enterprise in the Mongolian region where the communities are most scattered, than in the other two where they are within easier reach of one another. And, accordingly, while

<sup>1</sup> Gutzlaff's China, p. 144.

<sup>3</sup> Prichard's Researches, vol. iv. p. 297.

<sup>2</sup> Ibid. p. 142.

<sup>4</sup> Ibid. p. 290.

a very deficient subjectivity corresponding to deficient originality of self-direction in their ordinary occupations is to be noted in the verb in the languages of these races (see Gram. Sk., IV. 8, 14, 1 ; 40, 42, 55), the verb has person elements in the Tartar languages, and in the Tungusian of Nertchinsk, of which it is destitute in Mongolian, and which are only partially developed in Buriat Mongolian, in which the pronominal subject is not always quite taken up by the verb (*ibid.* 50) so as to become truly a person.

Perhaps Mongolian and Manju both lost the persons of the verb owing to their cultivation under Chinese influence. However that may be, the person element of the verb in the other languages is developed the more where there is the more of free volition in the race. Not only the Tartar, but the Tungusian also, is a stronger race with more of independent volition than the Mongolian; the latter being in great part subjected to Tungusian dominion.<sup>1</sup> In Turkish the verb has more subjectivity than in any of the other languages, just as the race has shown more enterprise and strength of independent volition (*ibid.* 25).

5. In Finnish (*ibid.* 150, 151), Lapponic (*ibid.* 159, 160), Tscheremissian (*ibid.* 130, 132), and Sirianian (*ibid.* 142, 143), the person elements of the verb differ generally from the possessive suffixes of the noun, the difference, however, being less in the two latter languages than in the two former; so that at least in Finnish and Lapponic they seem to be more distinctly subjective than in the preceding languages. And also the Dravidian languages of India have person elements (*ibid.* III., 93) appropriated to the verb. And this corresponds to the fact that these races are less bound to the one routine occupation than those Asiatic nomads, and have a more free development of their own enterprise and volition. But in Samoiede there is little subjectivity; and attainment of possession, which, under the urgency of want, is an object rather of desire than of volition, is thought with such interest that the conception of the verb as transitive to its object tends to be cast in this mould, the verb taking up a sense of its direct object, unless this be thought with special distinction, and the person element being then a possessive suffix (*ibid.* IV., 76). The Ostiaks, and also the original Hungarians, belonged to regions where want is less pressing, and the attainment of possession less urgent, because there is a better supply of game, and in these regions life, though also nomad, is partly that of the hunter, as is proved by Castren's account of the Ostiaks (*ibid.* 99), and by the accounts of the original Magyars and their kinsmen quoted by Prichard.<sup>2</sup> In Ostiak and Hungarian the direct object suggests not possession as in Samoiede, but rather the hunter's interest which gives energy to the action, and this it does more strongly the more distinctly it is conceived. The verb shows a stronger sense of the succession of the subject's doing when it has an object thus distinctly thought; and the person elements are mostly distinguished as subjective in corre-

<sup>1</sup> Prichard, vol. iv. p. 297.

<sup>2</sup> *Ibid.* vol. iii. pp. 325, 327.

spondence with the free volition of those races (*ibid.* 104, 106, 119) whose energy is not limited to a traditional industry.

6. It is, however, in the languages of America that the hunter's interest is most expressly developed. The hunter's action is partly the outcome of self-directing volition, and partly the suggestion of the object awakening his energy. And his transitive verb, instead of being purely subjective, has generally a person element representing the object combined with the person element representing the subject, and sometimes united with the latter, so that the two are indistinguishable from each other.

Of this, the Eskimo language furnishes a most striking illustration. And it is to be observed that as this language has been shown by the massive nature of its formations to be essentially an American language (*Gram. Sk.*, II. 5, &c.), it must be regarded as the language of an American race specially adapted to the Greenland region; and therefore a hunter's language though the principal game is seals.

Now, in the wonderful system of person suffixes which belong to the Eskimo verb (*ibid.* 15), it may be noted that the transitive person elements are in the indicative connected with a stronger element of process than the intransitive (*ibid.* 15); which is a point of resemblance to what has been said above of Ostiak and Hungarian. In Greenland also, the urgency of want is as great as in the region of the Northern Samoides, and the attainment of possession being more difficult, has even greater interest. Hence the subject when separate from the verb is in the genitive case when the verb has an object (*ibid.* 14); because the action passing to its object suggests the idea of attainment of possession.

7. The language of the Cree is remarkable as an example of a hunter's language. The prevailing interest is the subject exerting his energy on the object (*ibid.* 18). The person elements of the transitive verb express the volition of the subject as suggested by the thought of the object; for the two persons tend to be united indistinguishably (*ibid.* 19). The only exception is when the subject is first or second person, and the mood indicative. The first and second persons are thought in this language with remarkable strength and distinction of personality. It is a characteristic of the American races in general, that in their intercourse great attention is paid to the person addressed, and to self, that discourse may be duly adjusted to both (*Book II.*, chap. i., Part I., Sect. II., 1). And this would naturally strengthen the thought of the two persons, and the distinction of the one from the other. In the indicative, whether of transitives or intransitives, the realisation in the first or second person awakens the full thought of those persons respectively, by reason of their habitual nearness to the attention of the speaker. And being thus thought in the general associations of their personality, their person element precedes the verbal stem, their plural element, if they be plural, coming after the verbal stem, so slight is the connection between the plurality and the personality. The object person follows the stem, and thus the person element of the first and second person

indicative is separated from the object in the transitive verbs. But in the other moods the first and second persons, and in all moods the third person, follow the verbal stem, and combine with the object person when the verb is transitive (Gram. Sk., II. 26, 27).

The volition of the hunter, which is thus seen in the association of the subject with the object in the transitive verb, may also be observed in the strong distinction in Cree between the subject and the object, the life of the former dominating that of the latter. For it is thus only that we can understand the law that the second person cannot be object to either the first or third, nor the first to the third (*ibid.* 27). Such constructions are avoided by making the verb passive; because the person who is object of the action becomes then a subject instead of being an object, and the high sense of the personal life of the second person and of the first, which is natural to the race, is not violated by the predominance of the life of another person whose life is less strongly thought. This great difference between the subject and object also explains the law, that in a compound sentence the subject of the first clause cannot be object of the second (*ibid.* 27); the change of thought would be too great, and it is made the subject of a passive verb instead. So that the principal peculiarities in the use of the persons in the Cree verb correspond to the peculiarities in the volitions of a hunting race.

8. The Dakota also is a hunter, but less exclusively than the Cree; as he has an interest in agriculture too (this chap. II. 8). His transitive verb has person elements of the subject and of the object associated together, but not combined so closely as in Cree; for the object may be distinguished as preceding the subject, except when the second person is object to the first, the two persons then coalescing in one element (Gram. Sk., II. 43). This is probably due to the difficulty of thinking with distinctness the second person as dominated by the first, the second being thought the more strongly in its personal life. The difficulty does not arise when the second person is object to the third, for the third person has no subject element, and there is therefore no express predominance of that person over the second as there would be if they were in juxtaposition.

That the second person can be thought even indistinctly as object to the first, indicates that the sense of predominance of the subject over the object is less in Dakota than in Cree, which corresponds to the life of the race being less devoted to hunting. The volition of the subject also does not embrace the whole act which is to be accomplished, but only part of it, and the remainder follows the subject which is engaged with that part, and follows it as determined by it; for the persons in Dakota intervene between the root and the verbal element when there is one (*ibid.* 41); whereas in Cree they follow or precede both the energising element and the root. This also corresponds to the volitions of a race less bound to the attentive prosecution of their aims. Their circumstances are easier than those of the Cree, and there is less need for intelligent attention in carrying through the accomplishment of their ends. And the comparative freedom of self-

directing volition which they enjoy, corresponds to the superior subjectivity of the subject persons of the verb, as evidenced by their difference from the possessive suffixes as well as from the object suffixes (*ibid.* 41). There is more subjectivity in the Dakota persons than in the Cree; though the Cree verb has a stronger sense of the subject, as appears from its having a third person, which the Dakota has not. The Cree subject persons being the same elements as the possessive are not as true persons as the Dakota (1). They rather represent the subject than express the subjectivity, and hence it is that the first and second tend to precede. And there is a strong sense of the subject as the source of the strong doing or being that is in the Cree verb, rather than a sense of his inner volition.

9. The agricultural Choctaw does not combine the subject person with the object person. The subject person of his verb is the same suffix as the possessive of his noun (*ibid.* 54), indicating a low subjectivity, which corresponds to the small exercise of self-directing volition in following the routine of a traditional industry.

10. Crossing the Rocky Mountains to the west, we find races who live along the rivers by fishing; or who inhabit regions which, compared with the plains towards the east, remind one of Mongolia compared with the pasture-grounds of the Tartar race. For though the Tartar steppes differ greatly from the American prairies, yet the region west of the Rocky Mountains and southward to Mexico may be compared to Mongolia in the elevation of its tablelands and in the intermixture of desert and fertile country. In such a region the struggle for life is less keen; for the habitable parts are more secluded from attack than in the open plains east of the Mississippi. Those who live by fishing in the rivers have a comparatively easy subsistence; so that all those races are under less necessity to exercise an enterprising activity or a self-directing guidance of action in their ordinary life.

In Central America also and in South America life is comparatively easy on account of the abundant production of vegetable and animal life within the tropics and in the adjoining regions. Only on the dry tableland of Mexico would a searching outlook be needed to secure subsistence; and there and in the mountain region of the Andes attentive intelligent action would be required for success.

11. Now of all these American languages of the west and south, the Peruvian or Quichua and the Chilian are the only ones which, like the Eskimo or the Choctaw, put the person as a general rule at the end of the verb. And as the excessive rigour of the Eskimo region demands, that action shall be carefully aimed at its intended effect, in order that life may be sustained at all, a similar necessity in a much less degree, in the mountain region of the Andes, would require in the native races somewhat of the same utilitarian character. For the hunters who had to subsist there would need well-directed energy to supply themselves with the necessities of life, and in their self-directing volition would note strongly the efficacy of their actions to that end. That the Choctaws were strongly marked with a utili-

tarian character appears from their industrial habits; while the Cree and still more the Dakota could follow the suggestion of object or circumstance with less regard to the effect. So that the tendency to note in the volition the effect of action seems to correspond to the tendency to put the person at the end of the verb, according to the theoretical deduction of Book I., chap. iii., 3.

This connection of person endings in the verb, with a regard to the effects of action in the life of the race, is confirmed by the concomitance of the same features in the life and languages of the races of Central and Northern Asia and Northern Europe, and in those of the Dravidian and Indo-European families. For the life of all those races was more or less governed by self-directing volition of an industrial character, and which, therefore, looked habitually beyond the objects to the effects of action. And they all put the person element at the end of the verb.

On the other hand, the Syro-Arabian races, occupied always with doing and being rather than with material effects, put the essential element of the person before the verb, unless when a sense of completion so weakens the sense of the subject in the verb, that the verb is thought rather as an external fact than as an experience of the subject.

12. In their treatment of the person there is a noticeable similarity between the Syro-Arabian languages and some of those American languages of the west and south. For while those languages generally except the Peruvian and the Chilian put the essential element of the person before the verb, they generally, like the Syro-Arabian languages, put the plural element of the person when there is one at the end of the verb. And some of them in the past tense put the person itself at the end. Such is the place of the person in the past tense of transitives in Selish except in first plural (Gram. Sk., II. 63), in the past and future of neuter verbs in Maya (*ibid.* 97), in the perfect of transitives, and in negatived verbs and verbs of being in Caraib (*ibid.* 102); in all which the sense of the subject is weakened either by the verb not being in present realisation, or because it is thought more in the object or with weaker volition of the subject.

In Yakama the first and second persons are at the end in all the tenses, while the third is at the beginning (*ibid.* 56), as if there was a sense of effect in connection with the first and second person which was absent from the third.

In Quiché a verbal element expressive of tense comes first and is followed by the person, this being followed by the verbal stem (*ibid.* 94), as if the thought of the position in time took the verbal element out of the limitation of the subject into the realm of external fact. When the volition of the race does not contemplate the effect, the person precedes the stem, unless it be possessive, and as such has to follow.

13. In accordance with Book I., chap. iii., 3, a weakness of subjectivity may be observed in the verb in these languages proportional to the small degree of self-direction which their life demands. Thus the subjective and the possessive personal affixes are the same in the following intertropical languages, the abundant production of nature



suffering man carelessly to follow desire or habit, and so lowering the self-directing volition in the life and subjectivity in the verb; in Quichée (ibid. 94), in Maya (ibid. 97), in Caraib (ibid. 102), in Chibcha (ibid. 107), in Kiriri (ibid. 123), and almost the same in Chikito (ibid. 135). That such want of distinction between the subjective and the possessive affixes shows a weakness of subjectivity in the verb has been pointed out in 1.

In Maya the person endings of the past and future of neuter verbs, and in Caraib the person endings of verbs of being, of negated verbs, and of the perfect of transitives, are the object persons (ibid. 97, 102).

On the other hand, the timid and careful Guarani distinguish the possessive from the subjective affixes (ibid. 118).

14. In most of these American languages of the west and south may be observed a failure of the sense of the subject to penetrate the verb. They generally, indeed, think their verbs as aimed at their objects so as to take up person elements representing these; though some, as the Yakama and Kiriri, think their verb too exclusively as an affection of the subject to give it this objective reference (ibid. 56, 124). And none of them combine the object person and subject person in so close a union as is given to them in Eskimo and Cree. For none of these races have to pursue their game with such ardour. The Peruvian and Chilian combine the object person and the subject person rather more closely than the others.

But though many of them thus involve a reference to the objects in the verb, none of them, except the Peruvian, Chilian, and Mexican, carry the subjectivity of the person through the verb. In the others the person is connected with an element which expresses the succession of being or doing, and the verbal stem is more or less (ibid. 104) detached. And accordingly it is only the above three races that have developed thoughtful volition carried through the accomplishment of their actions. The others have an easier life and less call for such self-direction. The Chilian and Peruvian have been noted above (11), as having a strong sense of the effect of action and, therefore, putting the person at the end of the verb, while the Mexican, as being naturally less artful, put it at the beginning. The latter race depended more on things, the former on effects. They all had strong volition, and distinguished the subject persons from the possessive and objective. The strong volition of the Chilian is to be seen in the compactness, approaching to unity, which the Chilian verb has got from being penetrated by the subjectivity, and in the absence of auxiliary verbs. Quichua forms compound tenses with auxiliary verbs (ibid. 113), showing less penetration of the subjectivity through the verbal idea; as if the self-direction was less thorough, being perhaps less needed than in the higher latitude of Chili.

In Mexican the person can combine direct with the verbal stem without the intervention of abstract verbal elements which take up the subjectivity (ibid. 85); and there is no subject element of the third person. Both peculiarities probably are due to the outerness of thought which arose from a very searching outlook for subsistence,

and which would withdraw attention from the subjective succession, and in the third person from the subjectivity itself. The failure of the other races to carry the subjectivity through the verb corresponds to the less thorough action of their self-directing volition, and confirms the theory of Book I., chap. iii., 3, which is supported in all its details by this review of the American and other languages.

In Bask, also, there seems to be a shortcoming in the volition. The subject and objects are gathered about the auxiliary and the stem detached, as if the volition was directed to the objects, and they, thus regarded, suggested the action (Bask, 8).

15. The African races are in general distinguished above the rest of mankind by the weakness of their will. This it is which has made them at all times so liable to slavery, for the weak will naturally submits to the stronger will. And in consequence of this weakness, they have in general little self-directing guidance of action, but are led by circumstance or by habit. There are, however, great differences in this respect among the natives of Africa. In the east, contact and mixture with the Arabic race naturally exerted a strengthening influence, which may be observed in Galla and Nubian, and was carried even to Bornou, though the fertile valley of the Nile produced a national development which could maintain its native character. In South Africa also a conquering race was developed which overran almost all the continent south of the equator, and which made lodgments also north of it. And the Kafir race, and also the Ashantee or Dahoman race, show a strength which is not possessed by the others. Now it is interesting to trace through the languages of these races a subjectivity in the verb corresponding in its degree to the comparative strength of volition in the race.

In Galla the verb has persons, and they are at the end of the verb (Gram. Sk., III. 166), as is natural in a nomadic race which, following an industry, habitually note the effects of action. There is a similar development of the person in the Nubian verb, though its stem takes up little subjectivity (*ibid.* 132), and in the Kanuri or Bornou verb (*ibid.* 130, 176). In Barca, also spoken in the north of Abyssinia, the verb has its person endings (*ibid.* 140). But in Dinka, on the White Nile, near the equator, the verb has scarcely any person element (*ibid.* 147), and in Bari, further south, it has none (*ibid.* 155).

The Kafir verb has strong affinity for the subject, taking always a representative of the subject into union with itself; but even it shows a weakness of subjectivity such as might be expected in a genuine African language (*ibid.* I. 11).

A still greater weakness of subjectivity is to be seen in the other African languages.

The Hottentot verb can scarcely be said to have any true person element, for the personal suffixes are used only when the personal pronoun is the subject, and is not otherwise expressed. Even then they are used only in short energetic speech or in dependent sentences (*ibid.* 68). Moreover, there is an evident tendency to think the verb as embodied in the subject, and part of its external manifestation,

rather than of its inner life (*ibid.* 68). And the same may be observed in Kanuri (*ibid.* III. 175).

In Egyptian also there is a weakness of subjectivity in the verb, and a strangely objective nature in the verb substantive (*ibid.* 11, 114).

In Woloff there is an excessive weakness of subjectivity, and a tendency to think fact in its externals (*ibid.* I. 27, 28), so that verbs are differently conjugated according as they are thought with more or less of external manifestation in the subject.

16. And in all the African languages there is a marked tendency to think the verb in two parts, one of which has closer connection with the subject than the other (*ibid.* III. 132, 149, and I.), as if the volition did not embrace the entire action. With what extraordinary separateness of fine fragments such division is carried out has been seen in Grammatical Sketches, I.

In Kafir indeed the tendency to divide the verb seems to spring from the fragmentary tendency rather than from the want of volition, for both parts have connection with the subject, as if the volition was renewed.

But in Mandingo and Vei the subject is wont to have connection only with a mere abstract fragment, and the verbal stem is immersed in the objects (*ibid.* 33, 36).

In Vei the verbal stem is strangely weak, as if the action was not an important element in the fact, and the subjective fragments are more developed in consequence.

In Susu the subject is altogether separated by the object from the verb (*ibid.* 50).

In Yoruba the subjective part of the verb is not of so abstract a nature (*ibid.* 22), because thought is less bent on the object. In none of these four languages has the verb a true element of person.

In Egyptian fine verbal elements are separated from the verbal stem, and these take subjective personal suffixes, as if there was only a partial self-directing volition (*ibid.* III. 113). There is strong sense of the subject though it does not penetrate the verbal stem. This corresponds to the easy agriculture, in which there was little need for intelligent self-direction in carrying accomplishment through, though there was great interest in setting on foot what led to it.

In Nubian there is a stronger sense of the subjectivity through the verb (*ibid.* 130), but how faint it is appears from the weak connection of the person (*ibid.* 132), and from the realisation being so weak that the negative can have it like a verb (*ibid.* 131, 133 ; IV. 90).

In Bullom, which shows affinities with Kafir, the verb has larger connection with the subject, as if the volition grasped the action in its principal part. For the verbal stem has connection with the subject, and the part which is broken off is rather of a prepositional nature, carrying on the action to the objects (*ibid.* I. 23).

In Oti (*ibid.* 54, 59) and the kindred languages, the verb has persons prefixed to it, showing a subjectivity which is absent from the neighbouring language of Yoruba; and though it divides the verb, the sense of the subject is carried remarkably through the sentence. This is in exact correspondence with the strength of volition which

characterises the Ashantee and Dahoman race, to whom these languages belong, and which makes them so different from the people of Yoruba (see Book II., chap. i., Part I., 7).

In Pul also the representative of the subject adheres closely (Gram. Sk., III. 186) as a prefix to the verb, showing a subjectivity which corresponds to the superiority of the race over the negroes with whom they are in contact.

17. The subjectivity of the verb in the Syro-Arabian and the Indo-European languages, and the correspondence of this with the originality of self-directing volition in these races, have been already noticed (chap. ii. 3).

And the special strength of the subjective engagement of the persons in Gothic corresponds to the strong volition of the Teuton (Gram. Sk., VI. 158).

18. On the whole, the correspondence which has been traced in this section between the development of the person in the verb and the volitional character of the race shows that the one varies with the other according to the principles arrived at deductively in Book I., chap. iii., 3.

IV.—*The element of succession of being or doing in the verb is connected with the root as the needful processes of action are connected with the accomplishment of their ends in the mode of life to which the race has been adapted.*

1. The Polynesian language is remarkable for two features: the separateness of the elements which express the succession of doing or being, both from the subject and from the verbal root; and the association with the verb of elements which express the direction of the action in the view of the speaker, towards him, from him, down to him, and up to him (Gram. Sk., III. 6, 9, 16).

The distinction of the Polynesian race is that it has spread over vast spaces of the ocean, being found in islands as widely separated from each other as the Sandwich Islands and New Zealand, and showing its identity through them all by speaking the same language. Such a race must have had a singular aptitude for making long voyages, and for finding its way on the ocean.

Now there seems to be a correspondence between the above features of the language and this remarkable aptitude of the race. The use of the directive particles shows that the race think facts as movements which they observe; the element of succession (Def. 11) suggesting the motion, and the particle denoting its direction, in reference to themselves. And the tendency to think movements thus in their directions relatively to self is natural as a habit and advantageous as an aptitude in a navigating race. For the navigator who has no compass steers his course by the bearings of whatever objects he can observe in the sky or on the ocean, and he has to allow for the currents coming to him below, and to watch the winds coming to him from above. And

as he takes his proper direction with reference to each, he naturally reduces all these directions to the one point of view, guiding his course in reference to each, so that they shall all seem to approach him or to recede from him in the due directions. A sense of such directions, is the navigator's instinct ; and the Polynesian language, in distinguishing facts according to the four directions mentioned above, expresses the Polynesian's view of the movements of doing or being around him as if he was on a voyage through life.

That facts should be thought by him as movements, and that the movements of fact should be thought separately from the subject, and from the accomplished act or state which the verbal root denotes, is also characteristic of a navigating race. It shows that the race thinks facts in conformity with one dominant model, to which its habitual thought and volition is adapted. And that model corresponds to navigation. For navigation is movement directed by indications external to the mover ; and these he follows as the guides originally adopted, without renewing his volitions to follow them. The movement consequently is thought in connection with these indications, and not with his own volitions ; so that the process is separate from the subject. It is, moreover, movement leading to an object, at which, when it is reached, the movement ceases, and which the movement does not at all affect ; so that the process does not in any degree mingle with the accomplishment. And a universal conception of fact in the Polynesian form is an adaptation of mental action to the navigator's life.

2. In the Melanesian languages also there is a separation of the element of succession from the verbal root (*Gram. Sk.*, III. 45), which gives in some degree a similar character to these languages, and would indicate, as in Polynesian, an aptitude for the navigator's life. But this element, though separated from the root of the verb, is not always in these languages separate from the subject (see preceding section, 2 ; and this corresponds to the weaker and more timid character of these races who are not bold enough to trust themselves unreservedly to the external guidance of those objects by whose bearings the mariner steers his course, but would take care for themselves, and be conscious of new volitions, to avoid what seemed too adventurous. It accords with this diminished aptitude for navigation, that though there are directive particles in these languages, they are not used so generally with verbs as in Polynesian ; and belong rather to the accomplishment than to the process, being used to form derivative verbs. The directives are associated with the end ; as in the reduced navigation the bearing of the end of the voyage determines the course. In the Melanesian languages, however, as in the Polynesian, the succession is separate from the root, as in the life the process is separate from the accomplishment.

3. Both these features of the Polynesian language we lose in Malay. For the Malay is rather a fisherman than a navigator over the spaces of the ocean ; and he attains his ends with such ease that there is little or no sense of process in his life, or element of succession in his verb.

4. In Tagala there is a strong sense of the succession of being or doing, but instead of being separate from the verbal root it is closely connected with it or incorporated in it (Gram Sk., III. 56). Tagala is remarkable for its tendency to think fact in its result as an accomplished process (*ibid.* 57), and with little or no sense of the subject; as if the aptitude of the race was to attain results by processes which are involved with little volition in a growing accomplishment. And in the absence of information it may be conjectured that in the large and fertile Philippine islands the natives would not only be exempt from the necessity of taking to the sea, but might attain their ends as results of nature's own processes of accomplishment, which they merely helped or guided.

5. The processes of Chinese industry are not so simple. They need attention that they may be performed correctly. In learning them thought is occupied with the prescribed method which is to be followed; and in practising them when learned, the series of steps connected together by association is kept before the mind that it may be gone through correctly. So that though there is an absence of self-directing originality, as has been said in the last section, there is considerable sense of subsidiary processes in the occupations to which the race has been adapted. These processes, however, being thought as wholes when their parts are connected by habit, and the connections of their parts as successive steps towards accomplishment being little noted in the effort of imitation, involve little sense of succession. And those occupations being mainly of an agricultural nature, the process ends before the accomplishment begins. Accordingly, the adaptation of the race to these habits of life shows itself in the use of auxiliary verbs subsidiary to and separate from the principal verb, and not themselves involving succession of being or doing any more than it (*ibid.* V. 11).

6. In Japanese, the succession of being or doing goes through the expression of fact to a remarkable degree (*ibid.* 45). It differs from the Chinese structure in pervading largely the verbal stems of the language so as to be incorporated in them instead of being separate from them. And this corresponds to what we are told of Japanese industry, its artistic tendency, and its exquisite finish going beyond a merely imitative process (Book II., chap. i., Part I., Sect. V., 4). For the processes of the artisan are carried through the accomplishment of his work; and it grows under his hands as he works at it until it is finished. And as the process is carried through the accomplishment, so the succession tends to penetrate the root of the verb.

In Tibetan also the verbal stems are apt to take up a sense of process (Gram. Sk., V. 48). And this corresponds to the patient continuance of action which accomplishment is wont to require in the rigorous climate of Tibet.

7. The processes of pastoral industry have closer connection with the accomplishment which they subserve than those of the cultivation of the soil. For the shepherd and the herdsman partake of the fruit of their flocks and herds while they attend to their health and increase.

The industry and the attainment of its end go on together, but they are distinct from each other. The herdsman does not make the produce which he uses. He has it in consequence of his pastoral care; but it is not the work of his hands. He does not fashion and complete it, so as to carry through it the process of his art. The process and the attainment are in contact with each other, and yet distinct; and being in contact the presence of the accomplishment to the mind subordinates to it the thought of the process.

There are, moreover, other necessary parts of his business which are less immediately connected with the attainment of his end. The care of his pastures, and the provision of food for his cattle when these fail, are as separate from the accomplishment of what they aim at as the processes of tillage. And these tend to give independent strength to his thought of process.

Now, the nomad races live continually immersed in attention to all these processes of pastoral industry, as the life to which they are specially adapted. Accordingly they have a strong sense of the element of process or succession of being or doing in their verb; and that element, though it may be closely connected with the verbal root, is never taken up into it, just as in their life the processes of their industry may be contemporaneous with the accomplishment of their purpose, but never are themselves accomplishing processes. The structure of their verb in this respect corresponds to the activity of a race which is always occupied with processes connected with accomplishment rather than itself accomplishing. And as there are processes of industry in the pastoral life less closely connected with attainment though subservient to it, so in the languages of the nomad races there is a corresponding tendency to think process, when it engages the subject more strongly, as an auxiliary verb (Gram. Sk., IV., 7, 14, 2; 40, 50, 55, 61). In the Turkish language the more self-directing volition of the race tends to grasp the end more strongly along with the process, and to incorporate the auxiliary in the principal verb as an element of succession so as to increase the development of the latter (*ibid.* IV. 24, 29). But in the nomad languages generally the element of succession of being or doing is connected with the verbal root or element of accomplishment in the verb just as the industrial process is connected with the end at which it aims in the life to which the race has been specially adapted.

In Hottentot also, the nomadic character shows itself in elements of process and auxiliary verbs (*ibid.* I. 69); and amongst the Indo-European races in Lithuanian (*ibid.* VI. 190, 198), and in Slavonic (*ibid.* 227, 229, 230).

8. In the Dravidian verb the element of succession is more appropriated to the verbal root; the various roots having elements of succession proper to the idea which they express (*ibid.* III. 93). This indicates that the process is carried through the stem as the process of its accomplishment, just as it has been said above that the artisan carries his productive art through his work till he finishes it. There are abundant remains of Dravidian art in India; and these show that the race had the aptitudes of the artist and the artisan;

that they cultivated those processes of production in which the skilled work is carried through to the end of the finished performance; and that consequently the development of the element of succession in the verbal stem corresponds to that of their processes in their productions.

9. In the unproductive regions of Northern Asia and of Northern Europe the pastoral life assumes a somewhat different form from what it has in Central Asia. The northern races still tend their flocks and herds where these can be kept. But the keeping of them is less easy, and leads less surely to the end for which they are kept, while its difficulty causes it to become itself in some degree an end to be accomplished. There is therefore less sense of process subordinated as such to the accomplishment, and less of such elements in the verb or connected with it as auxiliaries. The difficulty of life also causes accomplishment to be less under the command of volition, so that it depends more on traditional methods, as well as to require patient perseverance. And hence arise two features of the most northern languages, a greater want of union between the element of subjectivity and the stem of the verb, and a larger development of derivative verbal stems involving elements of continuity or amount of action or parts of the series of activities, all suggestive of habits of perseverance (*ibid.* IV. 90, 109, 118, 134, 135, 144, 145, 151, 161, 162).

The Ostiak, according to the account given of him by Castren (see *Gram. Sk.*, IV. 99), lives by a variety of methods according as he finds them most practicable—by hunting, by fishing, some by keeping cattle, a few by agriculture. His versatility hinders him from having the hunter's grasp of the object with his volition. He is, as has been observed above in III. 5, both nomad and hunter, and the hunter's habit of thought has drawn the element of succession into the root of his verb, tending to be included within the root in intransitives, but often subjoined to the root in the transitive verbs (*ibid.* IV. 106, 108).

For the natural order of thought is person, root, object; and in the hunter's life the process of action is strongly associated with the thought of the object in the attention which he fixes on his game. The element of succession, therefore, in his verb tends to the object, there being a supplementary element of succession in the root when that which is in connection with the person does not sufficiently, as is the case in Ostiak, reach towards the object or the completion.

10. Hence, in accordance with Book I., chap. iii. 4, the American languages generally have an element of succession which refers strongly to the object, and where the volition does not grasp the accomplishment (preceding section, 14), there is apt to be a subjective process connected with the person, and an objective connected with the root, the latter expressing process towards the object of a transitive, towards the completion of an intransitive.

There is no such separation in Eskimo (*Gram. Sk.*, II, 15), in Cree (*ibid.* 19), in Dakota (*ibid.* 41).

But such twofold elements are to be seen in Yakama, *-es-* and *-sa* (*ibid.* 56); in Selish *-es-*, &c., and *-i* or *-m* (*ibid.* 63); in Pima *-igi-*, &c., and *-da* (*ibid.* 71); in Maya active verbs, *-kah* and *-ah-* (*ibid.* 97); in



Caraih transitive *-i-*, *-u-*, *-a-*, and *-kua* (ibid. 104); in various Bauro particles (ibid. 140). In Chibcha and Chikito the elements of succession are only suffixed to the stem, the persons prefixed (ibid. 107, 135); the process being probably suggested by the end to be attained.

In Mexican also the element of succession is at the end of the stem, as appears from the curtailment of the vowel of the last syllable in the formation of the perfect (ibid. 85), the person is at the beginning, the volition probably reaching in a single act towards the object.

In Chilian, and apparently also in Quichua, there is an expression of the succession in the vowel which is subjoined to the root in the verbal stem (ibid. 113, 143). But this element is in close relation also with the person, which is at the end of the verbal formation. The tendency in these languages to connect a person of the object with that of the subject (preceding section, 14), indicates that this process is directed towards the object according to the hunter's habit of thought.

11. In Choctaw, and perhaps also in Kiriri, the element of succession is obscure, but in all the other American languages it is a distinct element in the verb.

In Choctaw, the extraordinary development of pronominal elements used as defining and distinguishing articles, shows that the special aptitude of the race is for the observation of things (ibid. 47). Such a mental habit would lead thought to the end of action rather than to the process, so as to think the process in its end. In the fertile plains which the Choctaws inhabited, the observation of useful products of the soil would be natural to such a race, and the processes of production being thought in their end would become part of the end which action should accomplish, and which the verbal stem expresses, giving to the thought of it elements akin to process, and expressing continuity, or various parts of the succession of actions. To this association of process and accomplishment the small development of the succession in the Choctaw verb, and the development of derivatives referring to the series of actions, corresponds (ibid. 49).

In the tropical region of the Kiriri, life probably needs little process for the attainment of its ends, and there is proportionally little of the element of succession in the verb.

12. In the African languages generally, the element of process, or succession of being or doing, is brought into view by the tendency to break the verb into separate parts, which arises from the character of thought, which has been studied in Grammatical Sketches, I. In such fracture there is an element of process generally attached to the person, but such elements are also attached to the root, as in Susu (ibid. 50), in Bullom, in Vei, and in Kafir, whose verb ends in *-a*, changed in negative and subjunctive to *-e* or *-i* (ibid. 11, 23, 37). This expression of process at the end of the root corresponds to the life of those who subsist, like the hunter (10), by seeking the gifts of nature, and is to be seen also in Australian (ibid. III. 84). In the Woloff, the verbal stem has less reference to the object than in Kafir, or in any other of the West African languages, and the element of process is abundantly developed in connection with the subject, as if the race, not

greatly bent on material acquisition, was interested mainly with its own beings and doings, and so thought largely the successions of these.

In Egyptian, the process is separate from the accomplishment, and precedes it in its natural place (*ibid.* 117), which corresponds to a race living by an easy agriculture, in which accomplishment followed process without needing to be much governed by it.

In Nubian, which belongs to a far less fertile country, there are combined with the verbal stem elements of direction towards the object as if aiming at the material objects within reach, as well as the more subjective process preceding the person, which corresponds to more enterprising activity (*ibid.* 130, 131).

Of the latter, there seems to be less in Kanuri; for the *n* of the subjective verbs is rather of the nature of a derivative element forming a particular species of verb.

In Barea, the verbal increments are elements of process subjoined to the root, and separate from the subject, as if the life of the race involved a more patient seeking after the gifts of nature (*ibid.* 137).

In Dinka, the verbal prefix *a* (*ibid.* 147) is probably of the same nature as Egyptian *a*.

In Bari, there is a great development of elements which are subjoined to the various roots as expressions of process determined by them (*Def.* 23), and appropriate to them to form verbal stems (*ibid.* 155). There is little reference to objects; and the patriarchal life of the race (*ibid.* 151) has an unworldly character, as of those who, compared with other races, did not busy themselves much about material things. They would in that case be interested largely in their own beings and doings, especially as thought in their general associations; and to this would correspond the development of process in their verb, subjoined to the root.

The Gallas, as a nomadic race, express process in connection with the verbal root (*ibid.* 166), and incorporate in their verbal formations an auxiliary verb.

13. In the Syro-Arabian and Indo-European languages, there is abundant expression of the succession of being or doing; and, moreover, this element enters into the root of the verb (*ibid.* V. 48; VI. 15). For these races fashion their own ends; the Syro-Arabian being adapted to place his main interest rather in the beings and doings of life than in their material accessories (see above, I.), and the Indo-European to produce by his own art what he needs for his welfare and enjoyment. The former, surrounded by the desert, had little to interest him in the external world; and the successions of being and doing were thought with corresponding fulness. As he came out of the desert, these were thought less fully in Hebrew (*ibid.* V. 77), still less in Syriac (*ibid.* 102). In the African branches (*ibid.* 125, 128, 145, 156, 168), there were further changes in the same direction. But with the original Syro-Arabian, the succession of being and doing are themselves the end, so that process and accomplishment unite. With the Indo-European, the principal ends are produced by processes of art, carried through the accomplishment

till it is finished. And it is to be observed that this sense of process in the stem of the verb is stronger in Greek and Latin than in Sanskrit, being carried in them beyond the present part of the verb. This agrees with their greater development of the arts (*ibid.* VI. 65, 70, 84). Thus, in the languages of these races, the element of succession has the same kind of connection with the root of the verb that process has with accomplishment in their life ; a correspondence which may be traced between life and language through all the races according to the deduction of Book I., chap. iii., 4.

V.—*The development of tense accompanies the sense of succession in the verb and the full supply of interesting events external to the doings and beings of the speaker.*

1. The languages which are most deficient in the expression of tense are : the Eskimo, which has only one tense, and supplies the place of others by derivative verbs (*Gram. Sk.*, II. 16) ; the three northern Samoiede dialects (*ibid.* IV. 88), Ostiak (*ibid.* 106), Tscheremissian (*ibid.* 132), Sirianian (*ibid.* 143), Finnish (*ibid.* 151), and Lapponic (*ibid.* 160), all which have only two tenses, a past and a present, the future being expressed by an inchoative verb in Samoiede (*ibid.* 96) by auxiliaries in Finnish and Lapponic, by the present in the others ; the Polynesian, which has no really distinctive expression of tense (*ibid.* III. 6) ; the Syro-Arabian, which distinguishes only what is completed and what is not completed (*ibid.* V. 54) ; and the Bari, on the White Nile, which also makes only a similar distinction (*ibid.* III. 155). Now, all these races live comparatively secluded, in the dreary regions of the north, in the small and widely scattered islands of the ocean, or in the desert ; and in such regions the supply of facts external to the beings and doings of the individual is comparatively scanty. And this, according to the deduction of Book I., chap. iii., 5, should be accompanied by an imperfect development of tense in the verb. In the American languages of the Cree and Dakota there is scarcely any true expression of tense. There are at most only two in Dakota (*ibid.* II. 41), a present or past, and a future. And the same seems to be the case in Cree, as the other elements either are adverbial suffixes or are themselves treated as verbal stems (*ibid.* 38). The hunters in the prairies make a solitude by the wide bounds which they require for themselves, so that they have a small supply of external facts. The Chikitos of South America also, and their neighbours the Bauros, have only two tenses, a present and a future (*ibid.* 135, 137) ; and they, too, live secluded (*ibid.* 129).

2. The expression of position in time is separate from the verb, and, therefore, not properly tense in Chinese (*ibid.* V. 11) and in Malay (*ibid.* III. 76, 81, 2, 6, 10) ; and this also agrees with the above deduction, as the verb in these languages involves little or no sense of succession (preceding section, 3, 5) ; and therefore according to it the expression of tense should be separate from the verb. And in those languages in which the sense of succession in the verb is weak, the

expression of tense is more external than in those in which it is strong. The former is the case in Samoiede, in the Yurak and Yenissei dialects, which are the least exposed to foreign influence (Gram. Sk., IV. 88); also in Kanuri (preceding section, 12) among the African languages (Gram. Sk., III. 176), and in Choctaw (preceding section, 11) amongst the American languages (Gram. Sk., II. 55).

The tendency in the African languages to separate the element of tense from the verbal stem corresponds to their separation from it of the succession (preceding section, 12).

3. The element of tense appears in the verb in that part of its structure where the sense of the succession in the verb has strongest attraction for that of the position of the fact in the general succession of the facts of the world. In the past tenses of the Indo-European languages in their original form it is remarkable how the expression of tense goes through the verb, affecting the person and the stem, besides introducing an element between these, and affecting the whole with the augment. This corresponds to the penetration of the verb by the element of succession.

4. In Latin there is less development of past tense than in Sanskrit or Greek, because it has less sense than these of succession in the past (Gram. Sk., VI. 84).

The astonishing development of tense in Turkish and Turki is due to the great sense of succession incorporated in the verb (ibid. IV. 24, 25, 29); and the large development of tense in Yakut, Mongolian, and Tungusian (ibid. 14, 2, 4; 40, 50, 55, 61) is due to the same cause existing in a less degree. And a similar cause is found in the Woloff language in Africa (preceding section, 12), accompanying a remarkable development of tense (Gram. Sk., I. 29).

In Chilian also there is a great development of tense (ibid. II. 143); the energy and enterprise of the race generating an abundant supply of facts in their intercourse with those who dwelt within their reach, and their sense of process being at the same time strong (preceding section, 10). The Peruvian had less enterprise, living therefore more to himself, and had a smaller development of tense (Gram. Sk., II. 113).

It is probably due to a tendency in African thought to think the verb in some degree as embodied in the subject in its outer manifestation, rather than properly as in its inner life (this chap. III. 15), that in many African languages a so-called tense is formed which is indefinite as to time. For such a conception of fact withdraws it from the suggestions of time that arise from the successive states of a subject's consciousness (Gram. Sk., I. 29, 33, 59, 69; III. 116, 176, 181, 186). So that the principles of Book I., chap. iii., 5, prevail through all the families of language.

#### VI.—*Development of moods according to the tendency of the race to watch for fortune or avail themselves of circumstance.*

1. The Kafir language has a subjunctive mood, and it expresses a potential by an auxiliary verb (Gram. Sk., I. 5, 11). It has also a strong

tendency to combine, as if by a copulative, the realisation of one fact with that of another (*ibid.* 12), the first predominating over the second and reducing it.

There is no true subjunctive mood, expressive of subordination to another verb as part of the sentence which the latter governs, in any other of the African languages not of the Syro-Arabian stock, which have been studied in this work, except in Barea, Dinka, and Galla (*ibid.* III. 140, 147, 166); though there are conditional or other ideal formations in most of them. And it is remarkable that the Kafir and the Galla are the two most formidable races on the continent. As to the Dinka and Barea, information is wanting. But the success of the two others indicates an aptitude for policy and combination of circumstance, which, as accompanying the development of a true subjunctive, agrees with Book I., chap. iii., 6.

2. In Eskimo there is a remarkable development of dependent and ideal moods (*Gram. Sk.*, II. 10, 15), which corresponds to the aptitude of the race under the necessities of the region to avail themselves of facts and circumstances, as well as to wait on fortune, for the attainment of their ends.

In Cree also there is a subjunctive, an improbable ideal, and a subjunctive indefinite as to time (*ibid.* 24, 38), which last corresponds with the so-called nominal participle in Eskimo (*ibid.* 10), and indicates close subordination to the principal verb.

In Dakota there is a subjunctive, formed, as in Kafir, by changing *-a* to *-e*, and which by being affected with the article may be used as a noun (*ibid.* 45).

The hunting races had to look out for what might promise a supply of game, as well as to watch whatever might threaten the integrity of their hunting-grounds, and to take measures to preserve them, and they therefore had habitually an eye to circumstance as ancillary to the accomplishment of what their mode of subsistence demanded.

In the Choctaw verb there is not enough sense of being or doing (see above, IV. 11), to take up a sense of subordination and develop a true subjunctive, though the suffix *km* marks a dependent verb (*Gram. Sk.*, II. 48).

In Yakama the conditional formation with *-tarnei* seems to be only ideal; and there is no true subjunctive, as the attention to objects and conditions as parts of a fact is not sufficient to think a verb distinctly as an object or mere condition of another. But in Selish, the formation with *-ks-* is used as a true subjunctive (*ibid.* 63), the race being probably very dependent on circumstance (*ibid.* 64).

There is no true subjunctive in Pima, Otomi, Maya, or Caraib, though Pima and Maya have ideal formations (*ibid.* 71, 97) and Caraib an ideal suffix (*ibid.* 103). In Kiriri there is no true development of mood except by optative and imperative prefixes (*ibid.* 124) nor in Chikito except an imperative (*ibid.* 135); and not even this in Bauro (*ibid.* 137).

In Chibcha the participles are formed by reduction of the subjectivity of the tenses, but there is no subjunctive (*ibid.* 107).

All these races, from the Yakama to the Chibcha, with the exception of the Selish, who are high up the Rocky Mountains, live under conditions which do not require strong attention to means, and aims, and favouring circumstance (this chap., III. 10).

In Mexican and Quiché there is no true subjunctive, though there are ideal formations (Gram. Sk., II. 85, 94). For on the tableland of Mexico they were occupied rather with search for what would directly satisfy their wants (Introd. 3) than with combination of means which might help them to attain it (Gram. Sk., II. 84), and so did not combine one fact with another as subordinate to it, so as to produce a subjunctive.

In Quichua there is no true subjunctive, though there are potential and other ideal formations (Gram. Sk., II. 113); and though in Chilian there is said to be a subjunctive mood formed with *-li-*, it is not clearly ascertainable whether it is a true subjunctive or not (*ibid.* 143). In both these languages the sense of relation is so strong, and the connection so close between the verb and what it governs, that the realisation of the principal verb might overpower that of a dependent verb and reduce it to a verbal noun.

In Guarani the contingent and dependent has extraordinary development (*ibid.* 116, 119), in accordance with that waiting on fortune and using of circumstance to which their nature and position would naturally lead them (*ibid.* 115).

It appears therefore that where there is in the verb a sufficient sense of the being or doing realised in the subject to be reduced without being destroyed by a sense of its subordination to another verb, a true subjunctive mood tends to be developed, according as the mode of life to which the race is adapted is such as to develop a strong sense of fact or circumstance as object or accessory part of beings or doings, and yet not so strong that the fact or circumstance is thought so completely as part of what is realised by the subject of the being or doing that it is incapable of being realised in a subject of its own, and is consequently thought as a verbal noun. And this agrees with the deduction of Book I., chap. iii., 6.

3. In Polynesian and Tagala the subjectivity of the verb is so weak that though the sense of relation or dependence of the members of a sentence on the verb is weak also, yet a verb when thus subordinated to another verb loses its subjectivity and becomes a participle or a noun (*ibid.* III. 7, 9, 13; 55).

But in the Melanesian languages there is sufficient sense of the subject in the verb (this chap., II. 8; III. 2) to admit of the reduction without losing the subjectivity of the doing or being by subordination to another verb, and in some of them sufficient sense of the subordination of fact or circumstance as aim or accessory part of a doing or being to effect such reduction. And so a subjunctive mood is formed in Annatom, the most southern of the New Hebrides (*ibid.* 23, 5), as well as a potential and a hypothetical (*ibid.* 23, 7, 9). These dependent and ideal moods are not in Erromango or Sesake (*ibid.* 24,

28), which belong also to the New Hebrides. But there is a subjunctive and also two ideal moods in Maré, the most eastern of the Loyalty Islands (*ibid.* 36, 3, 4, 8, 11-13); and a subjunctive, but not an ideal, in Lifu, which belongs to another of the Loyalty Islands, and which has a stronger sense than Maré of accomplishment, and result, and of the succession of being or doing, and less than Maré of the quiescence of completion or of the subject (*ibid.* 37, 39, 11, 14, 15, 17). Whether these moods are absent from the other Melanesian languages it is hard to determine. The languages of Maré and Lifu are near akin to each other, but that of Lifu has the characters of a more practical people. And as the subjectivity of the Melanesian languages compared with the Polynesian has been attributed above (III. 2) to the weaker quality of the race producing more care and caution, the lower subjectivity of Lifu than of Maré should indicate a stronger and bolder people. It corresponds with these differences that there is less sense of the contingent and ideal in Lifu than in Maré, as if there was less dependence on chance and fortune in the former and more sense of the subjunctive, as if more use of fact and circumstance (*ibid.* 37). The future is expressed in Maré by the particle of the ideal mood, but this particle is used only for the future in Lifu, there being there less waiting on what may happen and more determination of what will happen. But they both, as well as Sesake, look out for helping accessories, and include fact and circumstance in their plans for the attainment of their ends, having at the same time sufficient sense of the subject for the expression of such subordination by a subjunctive mood.

In Malay the deficiency in the verb of the being or doing of the subject (III. 2; IV. 3) hinders the development of moods, as it is in this element that mood is expressed. But in Australian of Adelaide there is enough sense of the being or doing to admit of the development of an ideal mood, a prohibitive, and a preventive (*Gram. Sk.*, III. 84), but not sufficient plan or combination for a subjunctive, for the race lives merely on what it can find (*Book II.*, chap. i., Part I., Sect. III., 3).

4. In Tamil the strong sense of connection and dependence which is to be seen in the cases of the noun, when it is applied to the thought of subordinate verbs, overpowers their subjectivity, so that the so-called verbal and relative participles take the place of a subjunctive mood. In the same way the ideal is expressed without verbal subjectivity, not being properly thought as realised in a subject, and therefore imperfectly conceived as a fact (*Gram. Sk.*, III. 95). This indicates a want of ideality, natural to a practical race such as the Tamil, which is earnestly bent on matters of fact, and not content to wait on fortune (*ibid.* 91).

5. In all the languages of Central and Northern Asia and Northern Europe which have been studied in the fourth section of the Grammatical Sketches, except Sirianian, there is a development of ideal moods, but in none of them is there a true subjunctive. In general the connection of dependence or government between the verb and the objects and conditions is sufficient, the subjectivity being weak

(this chap. III. 4, 5), to reduce a dependent verb to a verbal noun. But in Hungarian this connection is weaker. There is less adjustment of the verb to what it governs. And such a shortcoming in the adjustment of plan to fact and circumstance, arising probably from their favourable region dispensing with the necessity of it, accounts for the absence from Hungarian of gerund as well as of subjunctive (Gram. Sk., IV. 121).

In Samoiede the gerund or verbal noun may take person endings which give it an appearance of subjectivity, but they are in truth possessive suffixes, and indicate close connection, but not subjective inherence (*ibid.* 98, 8).

6. In the Chinese group of languages there is no subjunctive mood. For those races have not sufficient originality of plan or design to adjust a fact or circumstance as aim or accessory part of a being or doing, carrying this subordination to the latter into the idea of the former, so as to affect its element of succession or process. They are, moreover, too realistic for the development of ideal moods, though they may express potentiality and such ideas as a matter of fact by the indicative of auxiliary verbs. In Japanese the verbal stem can take postpositions like a noun to express its government by another verb (*ibid.* V. 45), the weak subjectivity (this chap., III. 3) yielding to the subordination, so as to let the verb be treated as a noun, and the subordination corresponding to the degree of plan and combination shown by the race.

7. In Arabic, Ethiopic, and Amharic there is a subjunctive, in which the sense of realisation in the subject is reduced, and an ideal mood, in which in Arabic it is reduced further still (Gram. Sk., V. 55, 125, 136, 145). But neither of these is preserved in Hebrew, Syriac, Tamachek, or Haussa.

In the desert the Arab needed contrivance and plan so far as objects and circumstances furnished materials for them, and when these could not be formed he had to wait on fortune, so that he had sufficient sense of object or aim and of condition to affect a verb with dependence as such on another verb, and to develop a subjunctive mood (*ibid.* 55), and sufficient sense of the imagined to develop an ideal mood. There was use too for a subjunctive and an ideal in Ethiopic and Amharic, for in Africa attention is attracted strongly to the external accessories of being and doing as well as to the gifts of fortune. But in Tamachek and Haussa there is not sufficient sense of the being or doing in the verb to maintain an ideal mood or a true verb in a dependent position, and it is apparently an infinitive or verbal noun that is used instead of the latter (*ibid.* 158, 161).

In Palestine and in Syria life was easier than within the desert, and though thought tended more to external objects than in Arabia, there was less necessity for plan and contrivance, and less dependence on fortune. The contingent and ideal, therefore, was less thought. And the weaker sense of relations or dependence on the principal verb which arose from there being little plan accounts for the absence from Hebrew of the subjunctive mood. It explains also the more



verbal nature of the Hebrew than of the Arabic infinitive (*ibid.* 92); for the stronger sense of relation or dependence reduced the latter to a verbal noun. In Syriac the infinitive is very rarely used as a noun (*ibid.* 117); but there being less sense of the subjective process in the Syriac verb than in the Hebrew (*this chap.*, IV. 13), it did not develop a more verbal as well as a less verbal infinitive.

In Ethiopic, and in Amharic and Tamachek, there is a so-called verbal infinitive and a nominal infinitive, the former of the nature of a gerund, the latter a noun (*Gram. Sk.*, V. 128, 145, 158). The nominal nature of both was due, probably to the sense of relation or government by the principal verb in these languages, which, however, though greater than in Hebrew, is less than in Arabic, for there are no case endings, and to this is due the more verbal nature of one of the infinitives compared with the Arabic infinitive.

8. The Indo-European races had such art and plan that in their conception relations are thought with more distinctness than by other races. The thought of a relation with them involves a sense of the two correlatives, but may be clear of both of them; whereas other races lose the true thought of a relation by losing the simultaneous sense of the correlatives or think it in connection with one correlative. Thus the Syro-Arabian tended to think a relation in connection with the second correlative; and in thinking one fact as a related part of another, the relation tended to be thought with the former, and to be carried into the idea of its verb, the subordination to the principal verb falling mainly on the verb of the subordinate sentence (*ibid.* 93). By the Indo-European, the relation was thought more distinctly from the subordinate fact, and this retained more sense of its own organisation. Its verb was less affected in the being or doing realised in its own subject, and was thought more strongly as the governing member of the subordinate sentence. Hence, when one sentence governed another through an expressed relation, it did not, except in Latin when the relation was close, so subordinate the latter to the former as a part of it, that it was expressed by a subjunctive mood; although when the governed sentence was direct object to the principal verb, its verb was reduced to the infinitive. This use by the Latin of a true subjunctive in relative sentences is a striking feature of the language, as it corresponds to the practical genius of the race, by virtue of which they had a stronger sense of the bearing of facts and circumstances as accessory to their beings and doings, and of the subordination as such of the former to the latter. With this also agrees their more matter of fact and less ideal character than that of the Greeks, in consequence of which they had less interest in the imagined, and had only one ideal mood, while the Greek had two.

Sanskrit had less ideality than either; for it did not carry its one ideal mood into the past or the future so as to give it any tense except the present. Sanskrit was evidently affected by a Dravidian influence which lowered the life of its conception of fact. Hence came its reduced use of the tenses. And hence also came the loss of the second ideal mood which Zend had (*ibid.* VI. 52), and its large use of the

gerunds (ibid. 42), as well as its loss of the elements of relation thought separately from both correlatives.

Perhaps it was the superior productiveness of his native region, enabling the Latin to supply his wants more independently of fortune, which made him more practical and less ideal than the Greek. But, however this may be, the fact that he was so is certain; and his genius being such would lead him to note circumstance more strongly as subservient to his purposes, and to think less of the possibilities of the unknown. His development and use of moods, as compared with that of the Greek, is a strong confirmation of the principle of Book I., chap. iii., 6, which has been borne out by all the languages that have been examined.

9. Bask, too, in accordance with the strong sense of objects and conditions which is shown in the cases of the noun and the object elements of the verb, has a subjunctive as well as ideal moods (Gram. Sk., Bask, 10).

VII.—*Development of the passive verb, according to the tendency of the race to think action in its end; that of derivative verbs according to what gives interest to doing and being in the life.*

1. The use of the passive verb is carried farther in Tagala than in any other language studied in this work. And, therefore, in that language its nature may be best seen. Now, its great use in Tagala arises from a tendency to think the fact in its end, as accomplished in the objects and with the conditions (Gram. Sk., III., 57); in consequence of which tendency, the fact is so generally thought, not from the standpoint of the agent, but from that of the object or condition.

And there is a tendency of the same kind, though not nearly to the same degree, in Polynesian (ibid. 7), which also thinks fact as process to an end.

In Tongan, though the verb passes to the object more immediately than in the purer Polynesian dialects, there is at the same time a stronger sense of the action of the subject which keeps the verb from being thought in its accomplished end, and no passive is formed (ibid. 16, 2, 3).

But in Fijian the verb is thought with stronger reference to the object, and a passive is formed (ibid. 17).

2. In the Melanesian languages fact is thought less in its end, and is more tenacious of the subjective standpoint of the agent. But the languages of Maré and Lifu have a strong sense of the end of accomplishment, which they think as quiescent (ibid. 34, 37). And in them the verb has a passive construction, and there is a tendency towards this construction in subordinate or dependent verbs, which, when active, lose subjective energy, and are thought rather as states of action (ibid. 36, 3; 37).

3. Malay also has a strong sense of the end of action as a state of the object (ibid. 75, 76).

4. Among the Syro-Arabian languages the Arabic only, which only

had an accusative case ending, thought the verb sufficiently in relation to the object to be able to carry the simple verb into the object so as to think it completely from the standpoint of the object as a passive state of the object. Hebrew could do this only with the strong derived forms the causative (Hiphil) and the intensive (Piel), which from their nature have strong reference to the object. To the passive of the simple verb it could only approach by thinking it as a reflexive. The reflexive and the passive agree so far that the object of the action is in both the subject of the verb; but when the reflexive is used to express the passive, the subject realises the verb as thought from the standpoint of another who is the agent; whereas in the passive the subject realises the verb as thought from his own point of view. Into this point of view of the object the Hebrew could not enter with the simple verb, nor could the other Syro-Arabian languages, except Tamachek and Haussa, enter into it with any verb, all of them, with these exceptions, using reflexives for passives, because their verbs were not carried to the object as much as the Arabic verb. For when the action is thought in its end in the object, the mind passes more readily to the thought of it as realised by the object and seen from the object's point of view, this being the end, which is subsequent to the action. Tamachek and Haussa acquired under African influence a tendency to think the verb in connection with related objects. At least in Tamachek this is shown by the effort to form pronominal connections (Gram. Sk., V. 162).

5. So among the African languages a passive is formed by Kafir, in which the verb is thought with strong reference to the object, so as to take up a representative of it (*ibid.* I. 11); also, though less distinctly, by Mandingo and Susu, which have strong sense of the object (*ibid.* 33, 50), but not by Woloff, in which the verb has little reference to objects, nor in Bullom, in which the verb has to be supplemented by an additional element to carry it to the object, nor in Vei, in which, what the subject does or is forms so unimportant an element of fact (*ibid.* 36) that it is little thought as affecting an object, nor in Yoruba, which in its fracture of the verb shows that the object has not that attraction for the main body of the verbal root that it has in Mandingo (*ibid.* 22, 33).

On the other hand, a passive is formed in Hottentot (*ibid.* 70), in Galla (*ibid.* III. 165), in Bari (*ibid.* 155), in Barea (*ibid.* 140), in Nubian (*ibid.* 131), in Egyptian, though not much used (*ibid.* 119), and in the Dinka auxiliaries of the past and future *tî* and *bî* by lengthening their vowel, the subjective element of the present being apparently too weak to admit the modification (*ibid.* 147); but Kanuri and Pul form only a passive participle (*ibid.* 178, 186). The nomadic life which belongs to the Hottentot and Galla belongs also in part to the Dinka (*ibid.* 142) and Bari (*ibid.* 151); and the material industry with which it is occupied leads thought strongly to the object and effect. As to the Barea, information is wanting. But in Nubian the elements of relation to the objects which are infixed in the verb (*ibid.* 131) show a strong tendency to think the verb in reference to

the object, and the same tendency in Egyptian is involved in the sense of the accomplishment which distinguishes it (*ibid.* 116). In Kanuri the classification of the verbs as more or less subjective (*ibid.* 176) shows that they are thought so strongly in connection with the subject that they have little reference to the object. And in Pul, while the verb takes subject prefixes like Kafir, showing close connection with the subject, it does not, like Kafir, take object infixes, showing that it is not thought in close connection with the object.

6. In the nomad languages Tartar, Mongolian and Tungusian, a passive is formed (*ibid.* IV. 7, 22, 41, 50, 56, 62). For the care of flocks and herds involves habitual attention to external objects and effects; and action is thought with strong reference to these. But in the more northern regions objects which may be useful for the purposes of life are scarce, and methods of procuring subsistence become necessary which involve persevering action, and which engage the interest of the race as their main occupations. The interest is thus drawn rather to courses of action than to objects, and the thought of action becomes associated with elements of continuity thought as defining what is to be accomplished. Accordingly, the remarkable feature appears in these languages of a surprisingly large development of derivative verbs with the absence of a passive distinct from a reflexive. This is the case in Samoiede (*ibid.* 96), in Ostiak (*ibid.* 105, 109), in Tscheremissian (*ibid.* 135), and in Sirianian (*ibid.* 145). But in regions of somewhat milder climate, in which useful objects of action were somewhat more abundant, a passive is found, as in Hungarian (*ibid.* 118), in Finnish (*ibid.* 151), and even in Lapponic (*ibid.* 161), the climate of Lapland being mitigated by the Gulf Stream.

7. Passing to the most northern region of America, we find in Eskimo also a great development of derivative verbs of process, with the absence of a passive distinct from the reflexive (*ibid.* II. 5, 15). But in Cree there is an intensely strong sense of the object and a passive form of the verb (*ibid.* 18, 27). In Dakota the verb is not thought in its reference to the object (*ibid.* 42), and there is no passive (*ibid.* 41). In Choctaw the verb seems to be thought in its end (this chap., IV. 11), and therefore in connection with its object, and there is a passive, which, however, involves no general passive element, and is developed by observation of the object, on account of the intense interest with which objects were observed (Gram. Sk., II. 47, 49). In Yakama the verb is not thought in close reference to the object (*ibid.* 56), and there is no passive (*ibid.* 56). In Selish the verb is thought so much in the object, that when this is plural the verb takes up the plurality (*ibid.* 64); and the root of a transitive verb may take the intransitive persons and verbal element, and become passive in its meaning (*ibid.* 63). But in Pima, although the verbal stem is thought in close connection with the object it is not thought in its end, there being a strong sense of the activity of the subject (*ibid.* 68). Hence there is no passive in Pima (*ibid.* 72). In Otomi the verb is thought in very close connection with the subject (*ibid.* 81, 82), and there is no indication of its being thought in

strong reference to the object; and accordingly it has no passive. The Mexican verb has a strong sense of effect in the object (ibid. 84), and a passive form (ibid. 85). In Quiché and Maya the verb is thought in close connection with the object, as appears from the object persons which it takes up into connection with the verbal element of tense or with the verbal stem (ibid. 93, 96); and in both a passive is formed (ibid. 91, 98). So also both features concur in Caraib (ibid. 102, 104). The Chibcha verb shows little tendency to incorporate an object (ibid. 107), and forms no passive. But Quichua and Guarani think the verb in closer connection with the object (ibid. 113, 118), and form a passive (ibid. 113, 119). Kiriri thinks the verb only in its subject, so that it is never transitive (ibid. 120), and it has no passive form, but only distinct stems to express passive states (ibid. 124). The Chikito verb has more sense of the object, for it takes object persons; and it forms a passive (ibid. 135). In Bauro and Chilian the verb can incorporate an object; and it forms a passive (ibid. 140, 143).

8. In Chinese, the verb is referred strongly to the object, and there is a passive conception of fact, but there is not sufficient sense of being or doing connected with the root (this chap., IV. 5) to take up the passion, and it is expressed by a separate verb (Gram. Sk., V. 11). In Burmese and Japanese the object precedes the verb, as if the idea of the verb was particularised in the object, and in these languages there is more capability of formation (ibid. 28, 38, 46); and a passive is formed (ibid. 27, 45). But in Tibetan, though the object precedes the verb, and a passive is expressed, there is no passive form. The passivity is expressed in the subject by the absence from it of any case ending; the subject of an active transitive having the instrumental case ending (ibid. 36, 37). The verb is thought with so little subjectivity that it passes from the subject as an effect or does not pass from him, rather than inhere subjectively in him; and consequently there is not enough sense in the verbal stem of the affection of the subject to take up the passion.

9. The Indo-European races, inventive and observant as they always were, thought action in strong reference to its effect in the object, and accordingly developed a passive. There is a noteworthy difference between the Sanskrit passive and the Greek passive. The former is distinguished from the middle only in the parts of present realisation, while the Greek passive is undistinguished from the middle in these parts, but develops in the other parts a special passive element. Now, in order to understand this, it is necessary to remember that in the parts which do not involve present realisation, and for the most part even in those which do, the passive is expressed in Sanskrit by the verb substantive and the participle; a construction which expresses the passive more as completed effect than as the simple passive. In the conjugational or present parts, the Sanskrit passive is distinguished from the middle as passive effect more strongly than the Greek, and in the non-conjugational parts also it is distinguished more strongly as such by the above construction (Gram. Sk., VI. 74).

So that Sanskrit thought tends more to effect and result than Greek. Of this there are other indications, one of which is the great use of the passive, which is the most remarkable feature in the syntax of the language (*ibid.* 42).

The Bask, in accordance with the sense of the object which appears in the object elements of its verb, formed a passive with an auxiliary verb and past participle (*Gram. Sk.*, Bask, 12).

In all the above languages the development of the passive follows the principle of Book I., chap. iii., 7.

So also the principle there stated with regard to the development of derivative verbs may be traced through the languages.

10. The Kafir is one of the strongest and most practically energetic of the native African races; and in Kafir speech this character appears in the development which is given to the stem of the verb. For the tendency to form derivative stems shows a strength in the thought of the action or state; which takes up what the derivative elements express, so as to reduce them to mere accessories, and attach them to itself as parts of what the subject does or is. And the particular development which the stem of the Kafir verb receives, shows the interests of an active practical race.

For the stem must acquire a special interest by union with the derivative element, or it would not take up the latter. The derivative elements, therefore, which the stem takes up, indicate the special interests in the life of the race. And on this principle the Kafir verb, which has such a development of active and inactive derivatives, is seen to belong to an active race; for the more conscious a race is of action, when there is occasion for it, the more conscious will it be of inaction when it is at rest. The relative formation of the Kafir verb indicates an interest in action when aimed at an object, and the causative an interest in action or state, thought in its accomplishment as an effect. And it agrees with this activity towards external objects that the verbal stem takes up a representative of the object into union with itself. The reciprocal formation indicates an interest in action in reference to each other, which would correspond to a social character; and this, too, agrees with the nature of the Kafir (*Gram. Sk.*, I. 11).

The Wolloff thinks not so much of external performance or practical utility. His interest being that of a pleasure-loving social race, lies rather in the action or state itself as it goes on, or as it affects himself, or others also reciprocally with himself, producing an inceptive verb, an iterative, and a diminutive, as well as a reflexive, and a reciprocal. And the action or state being thought as an end in itself, is readily thought as an effect; and a causative also is developed (*ibid.* 31).

The Mandingos are the leading people on the northern slope of the highlands of Western Sudan, and have spread from thence in all directions into the neighbouring countries, forming everywhere an upper class, and in still more distant regions are found exerting influence as traders, propagators of Islam, artisans, and diplomatists.<sup>1</sup>

<sup>1</sup> Ritter, *Erdkunde*, vol. i. p. 362.

Their interest seems to be in things rather than in action; and they have only two derivative formations of the verb. These, however, correspond to practical energy, for they are a neuter or passive, and a causative, the former implying a sense of action and inaction or of object, the latter, a sense of effect (*ibid.* 33).

The Susu is akin to Mandingo, and has a somewhat similar development of derivative verbs (*ibid.* 50). But neither the Vei nor the Oti family, nor Yoruba, think the accomplishment which the stem expresses with sufficient strength to take up derivative elements, the interest in Vei being drawn off by the objects, in Oti by the energy of the subject directed to the objects, and being divided in Yoruba between the subject and the object (*ibid.* 36, 54, 20).

The Bullom verb is thought in close connection with the subject as cause, or source from which it proceeds to the object, and this gives an interest in causation, so that a causative is formed (*ibid.* 23). And the Kanuri verb also is thought in close connection with the subject, so as to be distinguished into two classes according as it is manifested externally in the subject, or dwells in the subject internally. The latter, and a few of the former, when thought transitively, acquire a special interest from reference to an object, and take up an element of relation. But the stem is thought in its action on the object only when this is most vivid, the object being the first or second person. Only these are taken up into union with the stem. The verb is thought so much in the subject as cause that there is a special interest in causation which gives rise to a causative formation. And being thought so close to the subject it also forms a reflexive, especially when it is itself internal to the subject (*ibid.* III. 175, 177, 179).

The Hottentot forms a reflexive, a reciprocal for plural, a reciprocal for dual, a causative, a relative to an object, and a diminutive (*ibid.* I. 70). The Hottentot also shows a tendency to think the verb in the subject (*ibid.* 68); and accordingly its development of derivative verbs is like that of the Kanuri. But the race being nomadic are more social and more indolent, and form accordingly reciprocals and a diminutive.

This African conception of the verb, as embodied in the subject rather than as belonging to its inner life (this chap., III. 15), corresponds to a sense of action as originating in the subject, yet without strength of volition. Such a conception naturally produces the above development of derivative verbs. Yet there is something similar in Egyptian (*Gram. Sk.*, III. 113, 114) without any such development. This arises from the facility of life in Egypt, which rendered action less necessary, and accomplishment a less important factor. The verbal stem was consequently too weak to originate derivatives.

Nubian life is more dependent on exertion, and requires an outlook for what may supply its wants. And accordingly, Nubian speech forms derived verbs expressive of external aim, outgo, and effect (*ibid.* 131, 133).

The Galla formations show an intense interest in effect, and of effect

produced for self, which corresponds to their overpowering predominance and conquests (*ibid.* 160, 165).

Dinka, like Egyptian, and probably for the same reason, forms apparently no derivative verbs. But Bari forms a transitive or causative, and uses for that purpose a prefix (*ibid.* 155), like the Syro-Arabian languages, and perhaps for a similar reason (18).

Pul forms transitive, reciprocal, reflexive, and causative verbs; and this corresponds with their character, active, social, mild, and practical. "The Fulahs are a mild, gentle people, not following trade or seeking dominion like the Mandingos, but leading an agricultural and pastoral life. Still, like so many active highland nations, they move in great numbers to the lower countries to earn by their greater industry, and to return with their gains."<sup>1</sup>

11. That the development of derivative verbs in the American languages corresponds with the interests which prevail in the life of each race may be seen in Eskimo (*Gram. Sk.*, II. 5), and in Cree (*ibid.* 18).

The life of the Dakota is easier than that of the Eskimo or the Cree. Action is with him less important than with them, and the verb consequently is thought with less interest, and has less power to take up derivative elements. It, however, forms a causative (*ibid.* 41) in accordance with the sense of effect as distinguished from object which the substitution of agriculture for hunting would tend to give (this chap., III. 8).

The Choctaw has a development of derivative verbs corresponding to the aptitudes and interests of the race (this chap., IV. 11), as well as the Yakama (*Gram. Sk.*, II. 56), the Selish (*ibid.* 64), and the Pima (*ibid.* 68, 72).

In Otomi the formation of derivatives is hindered by the singling action of thought which is characteristic of the race (*ibid.* 153). But derivatives, characteristic of the race, are formed in Mexican (*ibid.* 84). And the active character of these, contrasts strongly with the inactive character of the Quichee development, which exhibits so strong an interest in the varieties of inactive states, causation being thought as causing these. This character belongs in a still greater degree to Maya, for though the development in Maya is less than in Quichee, the proportion of active derivatives is smaller (*ibid.* 91, 98). Such a sense of inactivity is natural in the climate, and amid the productions of Guatemala where Quiché is spoken, and still more in the lower region of Yucatan, to which Maya belongs. For Guatemala, though on the tableland where it has been said (*Introd.* 3) search is needed for subsistence, is lower than Mexico, more fertile, and affording an easier life; while Yucatan is lower still, and its exuberance of production makes life still easier, and at the same time attracts interest, so as to draw thought from doings and beings, and give less development to the verbal stem. On the other hand, the fierce Caraib combines his verb with elements expressive of impulse towards accomplishment (*ibid.* 103); while the weak and timid Guarani combine it with elements expressive of watching and using what

<sup>1</sup> Ritter, *Erdkunde*, vol. i. p. 349.



chance may bring (*ibid.* 115, 119). There is no development of derivative verbs worthy of notice in Chibcha, Kiriri, or Chikito. But in Bauro there are many derivative forms; and these, as they indicate an interest in action and effect, and in the external relations of fact, correspond to the industrious character of the race (*ibid.* 137, 138, 140). In Chilian and Quichua the synthetic formations of the verbal stem are so numerous that they cannot be characterised (*ibid.* 113, 143).

12. In the Polynesian dialects the verbal stem being thought with little sense of either subject or process (this chap., III. 2; IV. 1), involves an interest in end or effect, and naturally develops a causative.

In Samoan the verbal stem has more sense of the subject, while, at the same time, it is thought in more immediate connection with the object, and develops a passive. Being thus a stronger element than in the purer Polynesian dialects, and more in relation with the object, it forms reciprocals and causatives of reciprocals, as well as simple causatives (Gram. Sk., III. 13). But in Tongan it is a weaker element, not carried so strongly to the object, and only causatives are formed (*ibid.* 16. 3).

In Fijian it is strong, as in Samoan, and forms intensives, reciprocals, and causatives (*ibid.* 17).

13. The Melanesian languages generally form causatives, and subjoin directives to the verbal stem (this chap., IV. 2; Gram. Sk., III. 21, 24, 27, 34, 38, 40, 41, 43). In some the directive elements are separate, as in Polynesian (*ibid.* 40, 41). Mahaga forms reciprocals (*ibid.* 43).

14. In Tagala the wonderful development of derivatives corresponds to the tendency to think fact in the accomplished end. For this leads to the conception of the verbal stem and the conditions of its accomplishment, all brought together because all thought in their end. The development is too great to indicate clearly any special character; but the reciprocal derivatives indicate a social character.

In Malay, verbs are formed by *men-*, *me-*, which expresses to bring into realisation what the root denotes, and by *ber-* to have it, the former being either transitive or intransitive, the latter intransitive, and in Dayak there is a middle or reciprocal prefix *han-*. There are also derivatives *-kan* and *-i*, which make the stem transitive or causative, and which seem to be of a prepositional nature (Gram. Sk., III. 75).

In these Oceanic languages the derivative elements of the derived verbs are prefixed, except those which are of a directive nature qualifying the stem, or of a prepositional nature leading to what follows. The former seem to be thought as antecedent conditions of the accomplishment, and to occupy therefore as well as the latter their natural place.

But in the continental languages the root or stem generally goes first; because in such regions generally there is more scope and more need for observation than in the islands, where everything quickly becomes familiar. This agrees with the principle of Book I., chap. iii., 7. A habit of observation gives interest to facts and objects as thought in the genera and species in which they are classed; and thus strengthens the root as thought in its general associations. And

hence it is that in the continental languages generally the root stands first so as to be thought clear of its present accidents.

In this respect the Syro-Arabian region is similar to the islands; there is so little in it to attract observation, and the Syro-Arabian derivative elements tend to precede the root.

15. In Australian an inchoative and a neuter are formed by elements subjoined to the root (this chap., IV. 12); and in Tamil a causative, which corresponds to the interest in effect in an industrial race (Gram. Sk., III. 91, 94).

16. In the nomad languages of Asia the development of derivative verbs in Yakut comprises reflexives, causatives, inchoatives, properatives, intensives, co-operatives, and reciprocals; and two or three of these formations are sometimes accumulated one on another. This corresponds to a life of industrial efficiency and process, which involves movement, exertion, and co-operation, and leads to social habits while it admits also inactive indulgence of self. Turkish and Mongolian do not form inchoatives, properatives, or intensives, nor does Manju form properatives (ibid. IV. 7, 22, 41, 62).

In the more northern regions the development became much enlarged with elements of process in accordance with the life of the northern races, which requires perseverance (this chap., IV. 9).

17. In Chinese there is not sufficient sense of succession in the verb (ibid. 5) to think parts in the accomplishment. And in consequence no derivative verbs are formed. Nor are there any true derivative verbs in Siamese, Burmese, or Tibetan. But in Japanese, in which the verb has more sense of succession (ibid. 6), there are derivative verbs of completion of causation, of progress of causation, of process (Gram. Sk., V. 45), which corresponds to what has been said of the race in this chap., IV. 6.

18. The Syro-Arabian derivative verbs in their original development are highly characteristic of an active race restricted in the sphere of its external interests, and whose interests in consequence are largely subjective. Having by reason of this subjectivity a strong sense of fact as originated in the subject, it has a strong interest in effect as originated in the cause, and it forms a causative; but the prevailing character of the development is reflexive. And according to what has been said above (14), the causative and reflexive elements precede the root, the former because that is its natural position, the latter because the interest of the root is heightened when thought in combination with them (see above, 10). There is so little sense of external relation that the subjective act or state itself is apt to be thought as in connection with an object rather than as bearing a relation to it (this chap., X. 11). And this could give an extension or intensity to the root so as to produce a derived form (Gram. Sk., V. 52, 53).

The Hebrew and Syrian dwelling outside the desert had a somewhat reduced sense of the subjective process, and not being under the same necessity as the Arab to note whatever objects could be made available, had less distinct sense of the object as such, whether exter-

nal or reflex, and consequently had not so large a development of derivative verbs (*ibid.* 79, 92, 102).

The Ethiopic forms causatives and reflexives; and in consequence of the tendency of African thought to contract the objects of its single acts, the root became lighter and more ready to take up derivative elements. The derivative formations, too, came by use to express such light thoughts as to be capable of taking up new elements, so that the formations were accumulated one on another, the reflexives supplying the place of passives. Intensives, frequentatives, and continuatives also were formed by reduplication (*ibid.* 124).

The Amharic development is like the Ethiopic (*ibid.* 145).

Tamachek forms causatives, neuters, reciprocals, and habitals by prefixes, verbs of becoming by a suffix, and habitals by an inserted or subjoined vowel; and it combines these formations on one another (*ibid.* 158). Thus, throughout this family there is a development of causatives, reflexives or reciprocals, and reiteratives; Tamachek, however, being less subjective than the others, so that it has neuters and reciprocals instead of reflexives, and less energetic, so that it has no intensive. This corresponds to an African influence reducing the Syro-Arabian subjectivity and energy.

Haussa shows only a special interest in process in its derivative verbs, as, besides a passive, it forms only inceptives and completives, both of them with subjoined elements (*ibid.* 168). Its suffix *-sɛ*, formative of verbs, reminds of Kafir *-sa* (*ibid.* I. 11).

19. With regard to the development of derivative verbs in the ancient Indo-European languages, Sanskrit differs from Greek and Latin in this respect, that from every Sanskrit root may be formed a causative, a desiderative, and an intensive verb, although the last two forms are not much used (*ibid.* VI. 31-33); while in Greek and Latin the freedom of formation had almost ceased, though the formations were to be found among the verbs of the language. Sanskrit thinks fact more in the result and effect than Greek and Latin (see above, 9). These have more interest in production compared with their interest in what is produced. And Sanskrit, thinking fact more in its end, has more tendency like Tagala to incorporate the conditions of the accomplishment in the verbal stem so as to form derivative verbs. For being all thought in the end they tend to be brought together in it.

The Indo-European development as seen in Sanskrit is remarkable as showing an even interest in the whole course of action, volition, process, accomplishment, corresponding to the originality, the skill, the performance of the Indo-European, each respectively being a source of special interest in the desiderative, the intensive, and the causative.

It is worthy of note that Latin has no form so distinctly reflexive as the Greek middle, which corresponds to its more outward practical turn.

20. In Bask there is scarcely any proper development of derivative verbs, for there are no true verbs but the auxiliaries. But there are derivative stems expressive of inclination, fitness, habit, abundance, possession (Bask, 13).

And from all this review the inductive inference which arises is the principle which has been stated in Book I., chap. iii., 7.

VIII.—*The verb tends to follow what it governs when action has to be habitually suited with care to object and condition.*

1. In the Tartar, Mongolian, and Tungusian languages those parts of the sentence which in the natural order of thought follow the verb (Def. 23), all precede it, retaining the same order of succession backward from the verb which they have forward from it in the natural order of thought. In such an arrangement, according to Def. 23, the interest of the verb as thought in its natural place before its objects and conditions is overpowered by the interest which it has when it has been combined with all these one after another; and the habitual interest of the race in doing or being is fully awakened only by such combination. When this combination comes to be expressed, the member last added to it is first separated and expressed as it lies next in the mind, having been present in the last act of thought, and after it the others in the order in which they have been added, so that the verb is last.

Now it is to be observed that in this combination the objects and conditions are fully thought and then combined with the verb, not merely glanced at while thinking the verb with attention directed to them such as is expressed by pronominal elements. The whole verb also is thought in combination with them, this being necessary for its highest interest. And the idea of the verb is brought into close affinity to the objects and conditions (Gram. Sk., IV. 14, 3).

When we turn to the life of those races we find that in the serious business on which their welfare depends, action is governed by its objects and conditions. It is not merely guided in the performance of it by noticing these or by aiming at them. But what is done is determined after attention has been given to the objects with which they are occupied, the aids and appliances which are available for the occupation, and the conditions under which it is carried on. Such is the nature of the nomad life, and the normal construction of the nomad sentence gives an exact representation of it. The nomad as he moves from pasture to pasture moves always tending his flocks and herds, and caring for them with intelligent volition. In the exercise of that care he determines his action with a view to his animals and to whatever means and instrumentalities he possesses; but while he thus determines his own action there are two conditions which he accepts as governing his activity—the season and the pasture. The sentence in which ordinarily he expresses his conception of fact represents him as he thus lives subject to the time and the place, concentrating his instrumentalities on his flocks and herds with industrial attention; for first comes the expression of the time, then that of the place, then the subject, then the means, &c., then the object, followed in the last place by the verb (*ibid.* IV. 27, 44, 64). And this arrangement corresponds to the principle of Book I., chap. iii., 8.

In Samoiede also the order of the words is like that which prevails in the nomad languages (Gram. Sk., IV. 98). But in less rigorous

regions, where life does not require such adaptation to objects and conditions, and where, moreover, it is not bound to the routine of nomadic industry, the words are more free to follow the natural order. Such is the case in Sirianian, Finnish,<sup>1</sup> Laponic, and Hungarian (*ibid.* 121, 146, 155, 163); probably also in Ostiak and Tscheremissian.

2. According to the above principle, the inverse order, with the verb last, is the arrangement proper to a race whether engaged in industry or involved in difficulties, whose action is habitually determined by a close regard to the objects and conditions, that so its ends may be obtained. But when a race, though industrial, is so far master of its circumstances that it is not bound to give constant attention to business, then in proportion to the freedom of its life there is freedom in the arrangement of its sentence; and either the natural order may occasionally prevail or special interests in members of the sentence, whether arising out of the fact itself or from the tenor of discourse, may single them out, causing them to be thought in some degree clear of their accompaniment so as to change their position.

The industrial order belongs in the main to the African nomads, the Galla (*ibid.* III. 169) and the Hottentot, though the indolent Hottentot has an easy life, and accordingly has great freedom of arrangement (*ibid.* I. 72).

It belongs also to the industrial Asiatic races, who adjust their actions to the objects and conditions, the Tamil (*ibid.* III. 105), the Burmese (*ibid.* V. 29), the Tibetan (*ibid.* 37), the Japanese (*ibid.* 47). But in Chinese and Siamese there is less of this adjustment, because the action is performed more from imitation or in obedience to tradition (this chap., III. 3; IV. 6); and the verb is apt to hold its natural place before the objects and conditions (*Gram. Sk.*, V. 8, 16).

The industrial order is also the normal order in Sanskrit (*ibid.* VI. 42), and in Greek, Latin, and Anglo-Saxon (*ibid.* 88, 172), but with great freedom of arrangement, just as these races were distinguished for productive art without being constantly engaged. But in Celtic, which belonged to that member of the Indo-European family which lived most free from care, this order is quite discarded, the verb being followed by the other members of the sentence (*ibid.* 129, 130; this chap. II. 9). In Lithuanian and Slavonic the members of the sentence seem to be free to follow the natural order, as if life was not strictly bound to industry. They lived a nomadic life under easy conditions, and gave little heed to any other industry.

In Bask, subject, verb, and object may take any order (*Gram. Sk.*, Bask, 3).

3. In the Syro-Arabian languages the object generally follows the verb, sometimes with the subject between. But in Aramæan, subject, object, verb is a common arrangement; and in Amharic the industrial order prevails, owing probably to an African nomad life. Ethiopic, being intermediate between Arabic and Amharic, has very great free-

<sup>1</sup> Prichard's Researches, vol. iii. p. 286.

dom of arrangement (*ibid.* V. 72, 95, 117, 148, 164, 170). This accords with the small degree of attention which in the desert, where objects are scarce, is habitually paid to the object in order to adjust action to it, and the increased attention which the object naturally receives outside the desert in Syria and Abyssinia.

4. In none of the Oceanic languages do the object or conditions precede the verb, except that in the Melanesian Mahaga, spoken in one of the Solomon Islands, the object sometimes precedes the verb and sometimes follows; and in the Sesake, spoken in one of the New Hebrides, it precedes exceptionally (*ibid.* III. 42). In Australian (Adehaide) the object and conditions tend to go before the verb (this chap., II. 1). This corresponds to the easy life of the islanders, in which they have comparative mastery over things to use them at will; and the difficult life of the Australian, in which he must accommodate himself to object and circumstance in supplying his wants.

5. The Kafir is sufficiently master of his circumstances to be conscious generally of using objects at will, but he has an industrial aptitude which makes him ready to adjust action to its object for the attainment of his end. In his language the object generally follows the verb, but it often precedes (*Gram. Sk.*, I. 13).

In Woloff, Pul, Bullom, Yoruba, and the Oti family of languages, spoken by races who live comparatively with ease in the fertile lowlands, the objects and conditions follow the verb (*ibid.* 22, 23, 27, 53; III. 187). But the more careful and industrious Mandingo, belonging to the highlands, where life is less easy (this chap., VII. 10), and the kindred races the Vei and Susu, put the direct object before the verbal stem (*Gram. Sk.*, I. 33, 39-47, 50).

The Egyptian, in his easy life in the fertile valley of the Nile, was conscious of using objects at will for the attainment of his ends; and he put the objects and conditions after the verb. But the Nubian and the Barea inhabited less favourable, more highland regions, where more careful adjustment of life and action to circumstance was needed; and they put the objects and conditions before the verb (*ibid.* III. 124, 128, 141).

In Dinka the direct object follows the verb in the present and imperative, but precedes it in the past and future, as if action was habitually so far adjusted to the object that it was only the stronger sense of the subject, as determining the verb in the present and imperative, which keeps the verb from being thought as determined by the object (*ibid.* 148); but in Bari the objects follow the verb, the indirect object before the direct (*ibid.* 157).

6. In the region of the Eskimo, life is so difficult that not only has action to be adjusted to its object with careful attention to the latter, but it has first to be adjusted to the application of whatever means or conditions are to be used in the operation, the use of these requiring great care and skill. And in the language not only does the object usually precede the verb, but the conditions come between the object and the verb, determining the latter more nearly (*ibid.* II. 16).

In Cree the object precedes the verb, for it is the object which rouses the hunter's activity and determines his action; but the indirect object and conditions come after, the appliances and conditions of the chase being freely used as natural consequents of the volition to carry it into effect (*ibid.* 38).

In Dakota and Choctaw the industrial arrangement—subject, conditions, object, verb—prevails (*ibid.* 43, 53) in accordance with the industrial aptitudes of those races (this chap., II. 8).

The Yakama and Selish live with comparative ease along the Columbia river and its affluents on fish and game, and they arrange the members of the sentence in the natural order (Gram. Sk., II. 56, 64), except that often in Selish the subject follows the verb, as they have more need than the Yakama to help their subsistence by hunting (this chap., II. 7).

In Pima the object precedes the verbal stem (Gram. Sk., II. 73). But in the more southern languages the object and conditions ordinarily follow the verb, as might be expected from the easiness of life in those climates.

In the languages, however, of the careful Guarani and of the Chilian the object may either precede or follow the verb (*ibid.* 117, 143).

In Quichua the hunter's order prevails (this chap., II. 8), object, verb, subject (Gram. Sk., II. 114).

And through all the languages there is a correspondence between the arrangement of the sentence and the life of the race which agrees perfectly with the principle of Book I., chap. iii., 8.

IX.—*Genitive and adjective precede when careful attention has habitually to be given to the nature of things. The adjective is developed according as qualities are supplied in the region which are appreciated as useful.*

1. The order also in which substantive objects are thought as correlated with each other, as well as the order in which they are thought as affected with a quality that results from comparing them with others of the same kind, differs often from the natural order of thought. And the cause of such disturbance is to be traced through the languages in which it occurs, that the correctness of the principles laid down in reference to it in Book I., chap. iii., 9, may be tested by comparison with facts.

The Kafir by his activity and skill dominates for the most part his surroundings. His verb accordingly is felt throughout the sentence as its principal member, and the doings and beings of the subject engage his principal interest. Those races, like the Woloff, the Pul, the Bullom, and the Yoruba, who live comparatively free from care or tension of energy, are not constrained to attend with care to the objects about them. But those races which belong originally to a less favourable region, the Mandingo, Vei, and Susu (preceding section, 5), are obliged to do so. These are much weaker races than the Kafir. They do not dominate their surroundings, but rather are

dependent on them. Their verb does not govern the sentence with such power as the Kafir verb; nor is it thought with such interest (this chapter, VII. 10). And their principal interest lies rather in substantive objects. This is to be seen most plainly in Vei, in which the verb is weakest (Gram. Sk., I., 36); and there the prevailing interest in substantive objects shows itself in a remarkable tendency to combine substantives with each other in correlations in which the natural order of thought is reversed. The careful attention which the race gives to substantive objects is accompanied by a special interest in these as combined in correlations which define them more particularly; and in proportion as the power of the race is small, the necessities of their life require that objects should be attended to with such particular interest. The interest of the substantive objects as combined with their correlatives overpowers their interest as thought separately. The idea as thought separately is dropped; and the idea as combined with that of the correlated object after this has been thought, takes the place of the former so as to reverse the natural order (Def. 23). This tendency is to be seen not only in Vei, but also in Mandingo and Susu (Gram. Sk., I., 36, 49, 32, 50), and even the strong family to which the Oti belong show the tendency to think substantive objects in the same fashion (*ibid.* 61). These latter, though their strong volition may be seen in the sense of the subject which goes through their sentence (this chap., III., 16), yet show by the readiness with which their verb yields to the fragmentary tendency of African speech, and the power which direct and indirect objects have in breaking the thought of it (Gram. Sk., I. 54), that the volition does not go through the action, but looks with strong interest to the objects and conditions for carrying out the performance. And the particularisation with this view which substantive objects derive from thinking them as appertaining to another object from which they may be thought to take their nature, imparts a special interest to that correlation, which leads, as above explained, to the synthesis of the correlatives and to the reversal of their order.

So also on the east side of Africa the fertility of Egypt and the favourable circumstances also of the Dinka and the Bari dispensed with the necessity of giving such careful attention to things as to have special interest for them as thought in a genitive relation which emphasises their nature; but in the less favourable regions of the Nubian and the Barea these had to be attended to, and in the languages of these races the genitive tends rather to precede the governing noun.

The Galla, as appears from their remarkable development of causative verbs, have an intensely strong sense of producing by their own energy the effects which they need (this chap., VII. 10). They are therefore comparatively independent of things, and do not think them as particularised by a genitive with such attention as to reverse the order of the correlatives.

But the Hottentots are of an indolent habit, and look with strong interest for useful things. Their interest in these is heightened by



thinking them specially as characterised by another object to which they belong like parts of it, as if having their nature from it. And in the Hottentot language the genitive precedes the governing noun.

2. Those races of North America which have to pay particular attention to things, think substantive objects with special interest when combined in correlation with a genitive. Such combination, as has been said, particularises the nature of substantive objects as partaking of that of the genitive to which they belong, as if they were parts of it. And thought in this connection, after the genitive has been thought, they overpower the idea of them as thought separately, and this being dropped the genitive precedes. So it is in Eskimo (Gram. Sk., II. 16), in Cree (*ibid.* 34), in Dakota (*ibid.* 45), in Choctaw (*ibid.* 53), in Yakama (*ibid.* 56), in Selish (*ibid.* 66). In the languages of Sonora the genitive generally precedes, but in the languages of Central and South America it does not in general tend to do so, just as amid the abundant production of those regions there is less necessity for careful attention to the nature of things that subsistence may be secured. In Chibcha, however, the language of Bogota, in Quichua, the language of Peru, and in Chilian, the genitive precedes (*ibid.* 108, 114, 142). The two latter languages belong to the mountain region, in which life is more difficult, and in which the great material development of the Peruvian civilisation took place, showing a sense of things and of their combinations such as industrial art requires. Bogota, too, was involved in that development.<sup>1</sup> And it is remarkable that these three languages should differ from the other South American languages studied in this work in putting the genitive before its governing noun.

In the Syro-Arabian region subsistence was easy in the oases, production impossible in the desert. And as there was little utility in giving careful attention to things, the substantive was not thought as determined either by correlatives or by qualities, and preceded these in the natural order.

3. In the languages of the industrial races the genitive precedes the governing noun as the normal arrangement. So it is in Tamil (Gram. Sk., III. 105), in all the languages of Gram. Sk., IV., in Chinese (*ibid.* V. 8), in Burmese (*ibid.* 29), Tibetan (*ibid.* 37), and Japanese (*ibid.* 47); in Amharic (*ibid.* 148; see VIII. 3 of this chapter), and in Sanskrit, Greek, Latin, and Teutonic.

4. In all these industrial languages, except Tibetan, the adjective also as a rule precedes its substantive (*ibid.* III. 105; V. 9, 29, 33, 47, 148; VI. 43); and this too is the order in Quichua and Chilian of the American languages (*ibid.* II. 114, 143), and in Hottentot of the African (*ibid.* I. 72). In the other languages the adjective, if thought as an adjective, follows in its natural order.

Siamese differs from Chinese, and Celtic from Sanskrit, in putting both the genitive after its governor and the adjective after its sub-

<sup>1</sup> Robertson's History of America, Book IV., Sect. IV., 4.

stantive (*ibid.* V. 18; VI. 129, 130); and this corresponds with the less careful life of these races, and the less earnest attention which they give to the nature of things.

There is a great difference between the particularisation of the nature of a substantive object by a genitive and its particularisation by an adjective. The former expresses some adaptation or association with the genitive object which affects the idea of the governor so as in some degree to assimilate the governor to the genitive, or cause it to be thought as derivative from this, suggesting the genitive relation. The latter involves an act of comparison of the particular object with the general idea under which it is thought. And if this act of comparison be weakly performed, the particularisation which it gives to the nature of a substantive object may not have sufficient interest to postpone the thought of the object till it has been affected with it, even though particularisation by a genitive have this effect. It requires a more careful attention to the nature of things to tend thus to combine the thought of a substantive object with an adjective than with a genitive. And it is only those races who follow an industrial life demanding such attention who not only put the genitive before its governor, but the adjective also before its substantive.

In proportion, however, as the race can live released from attention to its serious occupations, it has freedom in the position of its genitive and adjective, as well as in the arrangement of the other words in the sentence. And the races which, like the Polynesian, Melanesian, Tagala, and Malay, have an easy life, let the adjective as well as the genitive follow in the natural order, even though there is a strong sense of the comparative qualities of objects.

5. There is weakness in the comparative sense of qualities if the adjective tends to be expressed as a participle or verb. For it is then thought rather as a mode of existence of the person or thing comparatively with other modes of its existence than as part of the idea of the person or thing when compared with the generality of such persons or things. Such is apt to be the conception of the adjective in Cree (*Gram. Sk.*, II. 24), in Choctaw (*ibid.* 49), in Maya (*ibid.* 99), in Caraib (*ibid.* 101), in Chibcha (*ibid.* 108), in Chikito (*ibid.* 133). There is weakness also in the comparative sense of qualities if the adjective tends to be compounded with the substantive or with an abstract idea of the substantive object, for which the adjective has special affinity. For in either case there is want of distinctness in setting before the mind the general substantive idea in order to compare with it the particular object. This is to be seen in Cree (*ibid.* 24) and in Kiriri (*ibid.* 120), in Burmese (*ibid.* V. 21), and sometimes in Japanese (*ibid.* 43). This weakness also is evidenced by the adjective being expressed as a substantive or with little distinction from a substantive. For it is the comparative thought of the object which makes the difference between the substantive and the adjective, and when that difference is small the comparative sense of qualities must be weak. This is the case in the Oceanic and Dravidian languages (*ibid.* III. 5, 21, 24, 34, 40, 41, 42, 99), the languages of Sect. IV., the Chinese

(*ibid.* V. 4), the Syro-Arabian (*ibid.* 66), and also in the Slavonic (*ibid.* VI. 219). And to these may be added all the languages in which the adjectives are few (*ibid.* I. 9; II. 16, &c.)

Sometimes it appears in a want of aptitude to think a quality as attributed to a substantive. Thus in Yoruba the adjective when attributed is reduplicated, as if the comparative thought of the object was difficult (*ibid.* I. 20). There are signs of such inaptitude in Teutonic (*ibid.* VI. 151), Lithuanian (*ibid.* 186), and Slavonic (*ibid.* 219, 225). The same weakness appears also in the want of a true adjectival expression of degrees of comparison. This may be seen generally throughout the languages outside the Indo-European family, and it shows an aptitude in that family not to be found elsewhere for making a twofold comparison of a substantive object, first with the generality of objects denoted by the same substantive, and secondly with certain of those objects which also possess the same quality. This double comparison the Indo-European makes without letting go his apprehension of the substantive object, but keeps it present to his mind so as to think the quality in the higher degree adjectively as its attribute.

This aptitude for the comparative thought of substantive objects belonging so specially to the Indo-Europeans corresponds to the fine discriminations of the nature of things evinced by such an artistic and artisan development as theirs. The signs of weakness in this respect which have been noted above in the Teutonic and Slavonic languages, due perhaps to the unfavourable nature of the region, less abundant in objects possessing interest so as to invite comparison, perhaps to the influence of the northern races, corresponds to the late development of these races and to their inferior æsthetic genius.

In the Syro-Arabian family also it is to be noted that the more they came out of the desert the more was their comparative sense of qualities developed, so that there are more adjectives in Syriac than in Hebrew (*Gram. Sk.*, V. 110).

And thus through all the languages the principles hold true which have been laid down in Book I., chap. iii., 9.

6. It is to be observed that there is a general tendency to make the personal possessive affixes of the noun prefixes or suffixes, according as the subjective personal affix of the verb precedes or follows the verbal stem. The noun is thought most vividly as belonging to the person when it is thought to belong to him as his own doing or being belongs to him.

There is a remarkable feature in Kiriri, and also in a less degree in Chikito, and also in Fijian and in the language of Ambrym, in the expression of personal possession. General substantives denoting the class to which the substantive object belongs are used between the possessive and the noun to facilitate their connection (*ibid.* II. 126, 131; III. 31). This indicates a weakness in the thought of possession as an habitual element of the life of the race. And the general noun helps it as applied to a concrete object by recalling the thought of possession of other objects of the same kind.

X.—*The governing word or element is carried into close connection with the governed, and elements of relation thought with a due sense of both correlatives, according as skill is developed in the race. The development of elements of relation in the language corresponds to that of art or ingenuity in the race.*

1. In the Polynesian language there is a very weak sense of relations. For though there are many words used to supply the place of prepositions, they are rather nouns or verbs than pure particles of relation. They are not thought in transition from one correlative to the other, with the thought of both correlatives present to the mind along with them; but they are thought as separate objects of attention, and are therefore expressed as principal words of the sentence. The only pure prepositions in the language are the genitive prepositions *a* and *o*, and those which express the relations by and to (Gram. Sk., III. 4); and the only pure conjunction is *a* or *na*, which carries on thought from one fact to another (ibid. 6).

Now skill in navigation follows external indications according to the original purpose of the voyage, without renewed volitions of action applied to these as objects, means, or conditions (this chap., IV. 1). And on the land the wants of the Polynesian race are satisfied with such ease that there is little need for skill or art in the application of action to objects and conditions, or of substantive objects to one another in order to supply what they require. There is therefore little call to attend to the modes in which action may be applied to object and condition, or these to each other as fitted together. The development of true prepositions and conjunctions is due to such modes of adaptation needful to be practised by a race in the life which is adapted to its region, and inspiring an interest in such relations as one of the mental aptitudes whereby the race is fitted to prevail there, according to the principle of Book I., chap. iii., 10. And that principle is fully borne out by the Polynesian language.

A striking indication in that language of objects not being thought on into their connections among the members of fact is the use of an arthritic element (Def. 7) to connect proper names or personal pronouns with the rest of a sentence, as members of it, when the connection in which the personal pronoun or the proper name stands in the sentence does not readily fall in with the thought of it (Gram. Sk., III. 3). This expresses an act of attention directed to an object wherein the mind keeps hold of it to connect it with another object of thought, and shows an inaptitude to think objects as connected with other members of fact; a want of organic connection, which corresponds with the life of the race, whose wants are supplied by the bounty of nature without need for skill; according to the principle of Book I., chap. iii., 10.

2. In the Melanesian languages there is a somewhat larger development of elements of relation (ibid. 21, 24, 34, 37, 40, 44, 45). And this, taken in connection with the nearer reference of the verb to the object which is to be observed in the Melanesian languages compared

with the Polynesian (*ibid.* 21, 28, 31, 32, 34, 37, 40, 41), so that in two of the former, Sesake and Mahaga, the object may even precede the verb (*ibid.* 42), and with the tendency of the subject to precede the verb, indicates a certain degree of care in guiding action (this chap., II. 1) in reference to its objects, and in adapting it to its objects as well as these to each other, which makes a difference from the Polynesian. The Melanesian races are evidently more akin to the dark races of Borneo, New Guinea, and Australia, than to the Polynesian, Tagala, or Malay. Now the former, compared with the latter, are continental races formed amid the difficulties of the forests and wastes in the interior of those great countries, and the traces of these difficulties may be seen in the above features of the Melanesian languages; the original necessity in the life for noting the modes of applying actions and using objects corresponding to the development of elements of relation in the language.

Fijian, and even Tongan and Samoan, partake of those features in their tendency to give more prominence to the subject, and to think the verb with more reference to the object, than is done in Polynesian (this chap., II. 1; *Gram. Sk.*, III. 13, 16, 17); but Tongan and Samoan are as deficient as Polynesian in elements of relation, and Fijian nearly so.

In Australian of Adelaide the objects and conditions tend to go before the verb, showing the adjustment of action to those (this chap., VIII. 4) which is necessary in that region; and there is a development of elements of relation about equal to the Melanesian, but, unlike the latter, subjoined as postpositions (*Gram. Sk.*, III. 85). The Australian having less command of the conditions of his life, is obliged to attend to them with care in order to suit to them the way in which he will handle them. And he uses his elements of relation as postpositions in accordance with the principles of Book I., chap. iii., 10.

3. Tagala and Malay agree with Polynesian in the small development of elements of relation as in the easiness of the life of the races, which made little demand on their ingenuity. In Tagala the strange deficiency of relation is accompanied by a tendency to use the sense of direction or locality which is in the demonstrative pronoun to help it out (*Gram. Sk.*, III. 47, 48); and there is, as in Polynesian, great use made of the method of connecting one correlative with another by representing the former by a pronominal element in connection with the latter (*ibid.* 50), but there are no arthritic pronominal elements, that is, none referring to the word to which they are attached. The correlatives do not take up a sense of correlation into the idea of them, so as to fall into the connection without a special thought of them as connected. But they do not require such thought to modify the idea.

In Malay, as in Polynesian, there are many words used as prepositions which are in truth nouns and participles. And this indicates a similar inaptitude to note relations distinctly as such with a simultaneous sense of the correlatives, a want of organic connection between the latter, which, according to Book I., chap. iii., 10, corresponds to

the little need for the exercise of skill in the life of these races. There is not in Malay so great use as in Tagala of pronominal elements representing one member of the fact and united with another, in order to bring the two together, the members of the fact being less closely connected (*ibid.* 70), as if there was less skill in the Malay. See Book I., chap. iii., 10.

4. As in Australian of Adelaide, so also in Tamil, in the languages of Northern Asia and Northern Europe, in those of America north of the tropic of Cancer, and in Guarani, Chibcha, Quichua, and Chilian in South America, the elements of relation, instead of preceding what they govern in the natural order of thought, are subjoined to it as postpositions. Now, on comparing the conditions of life of all these races with those of the islanders of the Pacific and those of the remaining American races whose elements of relation precede what they govern in the natural order (*Def.* 23), we see in the comparatively difficult life of the former a need for careful adjustment of use in handling the objects and conditions, which is not required in the easy life of the latter. This is the cause to which this peculiar feature is attributed in Book I., chap. iii., 10; and the broad fact which has been mentioned confirms the principle most strongly.

Moreover, the closeness with which the postpositions in those languages are combined with what they govern is proportional to the need there is for skill in using the objects and conditions. And the number of elements of relation which are developed corresponds to the art which is called for in that use.

In the abundant production of India less skill and less ingenuity are needed in using the objects and conditions of life than in less favourable regions. And accordingly the postpositions in Dravidian are less closely united to the noun, and they are less numerous than in the more northern languages. The Dravidian postpositions themselves have almost the nature of nouns; and heavy pronominal elements often intervene between them and the stem to connect them with the latter. And the stem, instead of having an element of relation attached to it to correlate it, may be merely connected by the medium of an arthritic or other pronominal element (*Gram. Sk.*, III. 100, 101).

5. The postpositions attached to nouns in Yakut have much closer connection with the stem than in Tamil. There is much less use of pronominal elements in the former to connect the postpositions with the stem; and the element which is sometimes used arthritically for that purpose in Yakut is much lighter than the Tamil connectives (*ibid.* IV. 8, 10, 11). The postpositions also themselves are less of the nature of nouns in Yakut, and they are more numerous than in Tamil.

In Turkish the postpositions are more numerous than in Yakut, which corresponds to the greater development of the arts of life. And they are more separable from the noun, the noun being thought more distinctly as an object and the postposition more in transition to it, as if the greater development of art rendered practical skill less necessary (*ibid.* 19). The postpositions are fewer in Mongolian and

Manju, and more loosely attached than in Yakut, but Tungusian of Nerchinsk has as many (*ibid.* 36, 48, 52, 59). There seems to be a weaker volition in Mongolian and Manju (this chap. III. 4), and this would naturally be accompanied by less skill and less art.

6. In the more northern languages the close combination of postpositions with the nominal stem forming cases of the noun, and the large number of these, are a striking feature of those languages. Of such cases, not counting the so-called nominative, but including all others which are given in the grammars, Samoiede has 9 (*ibid.* 70), Ostiak 8 (*ibid.* 103), Hungarian 18 (*ibid.* 113), Tscheremissian 11 (*ibid.* 128), Sirianian 14 (*ibid.* 139), Finnish 15 (*ibid.* 148), and Lapponic 11 (*ibid.* 157). And it is remarkable that whereas in the Dravidian, Tartar, Mongolian, and Tungusian languages, plural nouns take the postpositions subjoined to the element of plurality, in the most northern languages, the Northern Samoiede dialects and the Lapponic, the postpositions tend to get inside that element. This shows when it takes place that the postposition affects the individual, and that the individual is multiplied as affected with the relation (*ibid.* 70, 157).

This development of case in these northern languages is in accordance with the principles of Book I, chap. iii., 10. For in those regions greater adroitness is needed in dealing with the objects and conditions of life than is necessary for those who live with their flocks and herds in the "land of grass." And in the most northern parts especial skill is needed in conforming life to its surroundings and resources that it may subsist at all. The remarkable closeness of union between a relation and its object which corresponds to this skill is to be seen also in the attachment of elements of relation to the stem of the verb in Northern Samoiede (*ibid.* 90).

7. Amongst the American languages also it is the most northern, the Eskimo, which subjoins elements of relation, most closely united to its nouns (*ibid.* II. 12). But except the five case endings and the genitive ending, and the three postpositional conjunctions, and, but, or, there is no pure element of relation in the language. Instead of pure relations nouns are sometimes used and incorporated in the verb, the object of the relation being taken as object by the verb (*ibid.* 9). And the subordinations of one fact to another are expressed without conjunctions by verbal forms (*ibid.* 10). This paucity of relations corresponds to the small development of the arts of life by American hunters; while the close union of the relations which are expressed with that which the relation governs in Eskimo corresponds to the skill with which the race are obliged to exercise such arts as they possess.

Throughout the American languages generally may be observed a striking inaptitude for the proper expression of relations and a tendency to connect the objects of thought by joining to the expression of one of them a pronominal element representing the other, instead of connecting them by the relation in which the one stands to the other. This mode of construction is to be seen in all languages where the sense of relation is weak. It is increased in the American lan-

guages by the instincts of the hunter's life. For as his energy is roused by the thought of his game, the volition of the subject is associated so strongly with attention directed to the object that the incorporation in the verb of elements representing its objects is a feature which characterises largely the languages of America (this chap., III. 6-8, 14). But in other relations also besides that of verb and object this method of pronominal connection instead of express correlation is to be observed (Gram. Sk., II. 9, 30, 31, 36, 105, 136, 139).

8. The hunter thinks his objects, not as materials of use or construction, but in their own independent existence in which they are to be captured by him before they can be made to serve his purpose. And the strength with which he fixes his attention on them in this view affects his habits of perception and thought, leading him to think substantive objects as they are, independently of the combinations of fact into which they may enter.

Hence arises the prevalence in the American languages of arthritic constructions. For this thought of substantive objects independent of their connections as members of fact, gives them such separateness that to make them amenable to construction a special act of attention has to be directed to them in putting them into construction. And this mental act suggests no expression of the particular relation in which the object stands, but merely joins it into construction. It is to be seen in Cree (Gram. Sk., II. 32-34), Mikmak (*ibid.* 39), Iroquois (*ibid.* 40), Dakota (*ibid.* 43), Selish (*ibid.* 66), Sonoran (*ibid.* 77), Otomi (*ibid.* 83), Mexican (*ibid.* 88), Chiapaneca (*ibid.* 90), Quiché (*ibid.* 94), Maya (*ibid.* 99), Caraiib (*ibid.* 105), Arawak (*ibid.* 106), and Bauro (*ibid.* 139). It is absent from Eskimo on account of the greater tendency to correlation (*ibid.* 35), and from Chibcha, Quichua, and Chilian for the same reason. Choctaw, Yakama, Guarani, Kiriri, and Chikito, had too little of the hunter's eager study of his game to develop it.

9. In Cree there seems to be no pure element of relation except a locative ending *-i* (*ibid.* 37). In Dakota, relations are expressed so cumbrously that they are evidently, as in Malay, thought not transitionally with a due sense of the correlatives, but independently (*ibid.* 43). The Dakota verb involves little immediate sense of the objects and conditions by reason of its weakness in the fact, and is thought with less interest than these. It is connected with them by an element on which thought fixes without having a due sense of it or them. For the race lived in an abundant region where there was little need for skilful action (Book I., chap. III. 10). In Yakama the verb is stronger as an element of the fact than in Dakota, and has therefore more reference to the objects and conditions, but substantive objects are thought with less interest, and the genitive relation does not unite the two correlatives as it would if thought with a simultaneous sense of them. The genitive consequently has to be affected with the postposition of its governor in addition to its own (*ibid.* 56). In Choctaw there are no prepositions except such as are used in forming derivatives (*ibid.* 49). And in general there is a remarkable



deficiency of elements of relation in the American languages. This corresponds to the general deficiency in the arts of life, and bears out the principle of Book I., chap. iii., 10.

But there are four languages which have especial interest in this respect on account of the development of arts and civilisation which the races attained, the Mexican, the Quichua, the Chibcha (this chap., IX. 2), and the Chilian. The Mexican seems to have a considerable number of elements of relation (Gram. Sk., II. 85). But only some of them unite closely with the noun, others require pronominal or arthritic constructions to connect them with it; and arthritic constructions prevail much in Mexican with the verb also (ibid. 88). On the contrary, in Quichua and Chilian there are no arthritic constructions. And in both there is a large development of postpositions attached immediately to the noun, two of them so fine that they are called case endings (ibid. 110, 142). In Chibcha also there are no arthritic constructions, and there are three case endings of remarkable fineness, but there seem to be scarcely any other elements of relation (ibid. 108). The Peruvian and Chilian, therefore, or, in other words, the Andian race, would seem, according to the principle of Book I., chap. iii., 10, to have more aptitude for the arts of life than the Mexican. They were certainly less fierce and sanguinary than the Mexican, and where he used force they often used policy.<sup>1</sup> The great works of both were due to their civil organisation (this chap., II. 8); but the more peaceful temper of the Andian race was probably connected with greater art and skill. Their region required more ingenuity to overcome its difficulties than was called for in Mexico; and it is the region which determines the special aptitudes of the race.

10. The Kafir is remarkable among the native races of Africa for his practical ability and for his advancement in the simple arts which minister to his comfortable subsistence; and just in the same degree his language is distinguished by its closely knit organisation. In particular the close connection of elements of relation with his noun, so as to form cases, marks his tendency to turn to his use what is within his reach. For such close combination arises from the interest which objects acquire from being viewed in such utilitarian aspect. The interest of use vivifies the thought of them and leads the mind to think them as adapted to present use, taking up into the idea such abstract elements of relation as fit them for it. There are, however, scarcely any pure elements of relation except those of case. And the fewness of these, with the strength of the organic connections through the sentence, indicate less art than practical sense of utility in the life of the race. Their power over the conditions of their life is sufficient to dispense with the necessity of very careful attention to things or to the nature of things, and the genitive and adjective partially combined with their noun follow it in the natural order (this chap., IX. 1). Only occasionally their action is determined by the object (this chap. VIII. 5). And only in the locative case formed with *se-ini*, does an element of relation follow the noun (Gram. Sk., I. 9). The race pay such atten-

<sup>1</sup> Prescott's History of Peru, Book I., chap. v.

tion to localities that the idea of the particular place specialises and particularises the general element of locality. But the other relations hold their natural place before what they govern (Def. 23), which, according to the principle of Book I., chap. iii., 10, should imply that there was in general no great need for care in handling the objects and conditions of their life. This quite agrees with the habits of the Kafir, and therefore supports that principle, to which the features of the language which have been noted strikingly correspond.

The Fulahs have few pure prepositions (Gram. Sk., III. 187). Their language contains strong concord of the adjective and its substantive (ibid. 184), but only a trace of the concord between the verb and subject (ibid. 186) when the subject is plural. And there is, therefore, not such combination or sense of relation as in Kafir. The language has, no doubt, been greatly disturbed by negro influence. But the race do not show such evidences of practical skill as the Kafirs; and the inferiority of their language in the above respects is therefore in accordance with the principle of Book I., chap. iii., 10.

The case is similar with the Bullom (ibid. I. 23).

The Woloff has still less combination, though it has a highly developed verb; and its four or five pure prepositions lie apart from the noun (ibid. 26). This corresponds with an easy careless life of an active race in a fertile region where there is little call for skill or contrivance.

And the Yoruba, without combination even in its verb, and having no pure prepositions (ibid. 20, 22), shows the careless and artless inactivity which belongs to the race.

On the other hand, the industrious Mandingo (this chap., VII. 10), and the kindred races of the Vei and the Susu, show careful attention to things (this chap., IX. 1). They also show careful attention to adjust the application of actions or things to substantive objects by subjoining their elements of relation as postpositions to their noun. Of these they have five or six purely expressive of relations (Gram. Sk., I. 32, 36, 50).

In the Oti or Ashantee group of languages the objects and conditions are strongly thought (preceding section, 1), and the elements of relation which are not verbal are subjoined as postpositions. They are, however, mostly substantives (ibid. 61), as if the race depended more on force than on art and skill, and had therefore little sense of pure relation. The strong sense of the subject going through the fact corresponding to the volition governing performance, is seen in the verbal prepositions (this chap., III. 16).

11. On the east side of Africa the Egyptian language shows great tendency to combination in the remarkable use of pronominal connective elements (Gram. Sk., III. 121). For it is to be observed that though there are several prepositions, the ordinary relations of case are replaced by pronominal elements representing what governs the noun (ibid. 110). This indicates a deficient sense of relations, and a failure to carry the governing word into connection with what it governs; yet, at the same time, a combination of action, means, and condition

to attain their ends. And, according to Introduction 4, and the principle of Book I., chap. iii., 10, the language should belong as it did to a race on a fertile soil, whose wants were supplied by production without requiring ingenuity or skill.

The great works of Egypt are due not to the genius of the people, but to their organisation under despotic rule, and to their numbers. The life of the Egyptian in his fertile country dispensed with special care in dealing with objects, and the elements of relation preceded what they governed (this chap., VII. 10).

In one important respect the Egyptian language differed from the Kafir. It did not incorporate in the verb pronominal representatives of the object. And this corresponds to a life more engaged in production and less in pursuit or search; just as the region from the first determined the race to a life of easy agriculture (Intro. 3, 4).

In Nubian, the verb is thought much more than in Egyptian, as involving a sense of the object. And this is carried farther than in Kafir, for the verb incorporates a strong element of transition to the indirect object (Gram. Sk., III. 131). Yet the sense of the direct object in the verb is weaker in Nubian than in Kafir, though that of its indirect object is stronger; as if it regarded its objects more widely and less closely. The region does not invite production like Egypt. It is less favourable than South Africa, requiring of the race a larger attention to their surroundings. It offers less materials for art and skill, and it requires action and use to be determined more strictly by the objects with which they deal. And to this all the features of the language correspond. The verb and the transition are adjusted to the object, so as to be thought with special interest after they have been combined with it, and to follow it in expression (this chap. VIII. 5). But though thus determined by the object, they are not carried on to the object. Practice is governed by the objects, but not applied to them with skill. There is an inaptitude for connecting the verb and the object in an element expressive of the relation of the former to the latter. Such an element of transition in Nubian, instead of involving a sense of the two correlatives so as to bring them together, has very loose connection with the object (Gram. Sk., III. 128). And so far does the thought of the verb fail of being carried to the object that this requires the same element of transition as the indirect object. There is greater care than in Egyptian or Kafir in thinking substantive objects in connection with other substantive objects, so that the genitive tends to precede its governor (preceding section, 5), as well as in adjusting relation to its object so that relative elements are postpositional. And all this indicates more care bestowed on objects than was called for in the fertile valley of the Nile along its lower course or in South Africa. But there is remarkable deficiency in the sense of relation (*ibid.* 128, 134), indicating, according to Book I., chap. iii., 10, a want of art which corresponds in fact to the small progress of the race. As compared with the Mandingo languages, the Nubian shows much greater sense of action going towards the object. But Mandingo has closer correlation of substan-

tive objects with each other, as if when there was less force there was stronger attention to things.

Barea uses not prepositions but postpositions, as might be expected in the region (this chap. VIII. 5), and has apparently small sense of relation (Gram. Sk., III. 138).

The Dinka and Bari use prepositions, of which Bari has very few; both races seem to live an easy life (*ibid.* 142, 144, 151, 156).

The Hottentot and Galla use postpositions, in accordance with the adjustment to external conditions which is required in the nomadic life. But, whereas the Galla takes small note of relations (*ibid.* 162), the Hottentot has a fair supply of postpositions, though most of them are reducible to verbal stems (*ibid.* I. 65). According to Book I., chap. iii., 10, there should be an aptitude for the arts of life in the Hottentot race to correspond with this feature of the language; and that there is we are informed by Kolben. "In agriculture," he says, "they excel all the Europeans who reside among them, who often call upon them for advice in the management of their lands. And in many other arts and customs, as I shall show in their proper places, these people discover good marks of capacity and discernment. They make excellent servants. And with regard to capacity, they are often employed by the Europeans in matters that require no small capacity; and generally acquit themselves very handsomely."<sup>1</sup> Though the Gallas are an intelligent race, there is no such evidence as this for their practical aptitude.

Kanuri has more sense of relation than Nubian, and less pronominal reference of the verb to its objects (this chap., VII. 10). The postpositions are, as in Nubian, loosely connected with the noun (Gram. Sk., III. 173, 181).

12. In Chinese there is only an approach to elements of relation. For the prepositions and postpositions are not only reducible to verbs and nouns, but retain the strength of meaning which belongs to them as such (*ibid.* V. 8). This corresponds to the imitative character of Chinese production (this chap. III. 3), which, according to the principle of Book I., chap. iii., 10, should tend to produce a want of organic connection between the parts of the sentence. For the Chinese do not note for themselves the relations of things, observing how the correlatives are fittingly connected in the relation; but they copy the adapted things in their concrete identity. So it is also in Siamese (Gram. Sk., V. 16). But in Burmese there seem to be about thirteen proper postpositions (*ibid.* 24), and some conjunctive particles subjoined to the verb (*ibid.* 28). In Tibetan there seem to be three proper postpositions (*ibid.* 32), and a few conjunctions (*ibid.* 37). In Japanese there are nine postpositions, and one or two conjunctions (*ibid.* 41). The elements of relation have slight connection with the noun (*ibid.* 37, 47). These races, though imitative, are less confined to imitation. The Burmese are no doubt affected with Indian influence; and the Japanese have great ingenuity (this chap., IV. 6). All three adjust to the objects the ways they are to

<sup>1</sup> Kolben's Cape of Good Hope, chap. iv. 3, 4.

be dealt with (this chap., VIII. 2), and subjoin the relation to what it governs.

13. The native region of the Syro-Arabian race was unfavourable to the development of art and skill in using things. The incentives to production were small in such a region, and the suggestions of contrivance few. The race which was quite adapted to it gave more attention to beings and doings, and less to material objects than other races.

Their verb had little reference to objects and conditions, and was liable to be imperfectly carried on in thought to these, so that sometimes the connective element was thought with separate strength as a noun (Gram. Sk., V. 85); and the modes of dealing with object and circumstance were weakly noted in their life, and the elements of relation got small development in their language. Sometimes the antecedent in a correlation was almost lost sight of (*ibid.* 68). Though life was easy in the oases it had sometimes to be spent amid the difficulties of the desert, and difficulty must be met with contrivance. So that though the languages of this region put the element of relation generally in its natural place before what it governs, corresponding to the little care with which their life in general required object and circumstance to be handled, yet in Arabic there is a somewhat greater development of relation than is found in Hebrew on the edge of the desert, or in Syriac outside it, and a tendency to carry correlation or government into the thought of the governed, with adaptation to it, so as to produce cases with an element of relation subjoined (*ibid.* V. 60, 73, 85, 92, 109). The weakness of the thought of transitional elements of relation produced a tendency to take up a sense of correlated objects (this chap., VII. 18), and to affix to verbs and nouns pronouns in correlation with them (Gram. Sk., V. 51, 52, 56, 80, 92, 115). Ethiopic differed little from Arabic; it retained the accusative ending *-a*, showed the tendency to take up pronominal elements, and did not develop any additional pure elements of relation (*ibid.* 131, 134). In Amharic there is an accusative ending *-n*, which has very loose connection with the noun; about six pure prepositions attached to the noun, and rather more conjunctions (*ibid.* 147, 148). Tamachek has three prefixes of case, but shows an inaptitude to note relations, and a tendency to connect by means of pronominal elements (*ibid.* 153, 162); all which corresponds to the influence of the desert region. Haussa has very few prepositions or conjunctions (*ibid.* 169).

14. In the Indo-European languages the expression of relation reaches its highest development; and the races which have spoken those languages surpass all others in invention of art and in skilful practice. The Indo-European case endings are elements of relation which, being subjoined to the stem of the noun, show that the race was not satisfied with the thought of the relation till it was carried into the noun and specialised by application to the noun (4). But a further careful accuracy in applying them appears most strikingly in the cases of dual and plural nouns, for the relation is not adjusted roughly to the dual and plural aggregate, but it gets inside the element of number to reach the individual object, so that the relation

as adjusted may be more exactly defined (Gram. Sk., VI. 11-13). This remarkable feature is not found elsewhere except in the most northern languages of Asia and Europe, the Samoiede (*ibid.* IV. 71) and the Lapponic (*ibid.* 157), where the difficulties of life require great skill in dealing with things; the distinctly lower sense of relation in American speech accounts for its absence from Eskimo. The penetrating adjustment of relation in Indo-European is shown also in its affecting not only the substantive, but the adjective as well. To the Indo-European case endings all other relations are fitted and are brought by them into adjustment with the noun; and this adjustment being sufficient to satisfy the care required in the application to the object, the relation precedes in its natural place. For the Indo-European is not so subject to his surroundings, as to have his use of objects and conditions determined quite by these.

In the distinct sense of relations Greek and Latin have a great superiority over Sanskrit. The scarcity of conjunctions in Sanskrit, and the rare use of prepositions except in composition (*ibid.* VI. 38, 42), betray an inferior distinctness in the thought of relations. For though, as shall be shown in the next chapter, a special influence affected Greek and Latin, which made them more general in all their parts, and thereby tended to reduce inflections and to increase the use of prepositions, this does not account for the greater use of conjunctions in Greek and Latin. The element of relation in Sanskrit, instead of being thought distinctly as transitional, tends to be used in combination with the antecedent in forming compound verbs which pass to their objects through the relation or with the consequent in forming adverbs which consist of a preposition and a substantive (*ibid.* 40). In the former use they express a particular aim, in the latter a particular application; in neither are they abstracted as generally applicable. This superior distinctness of relation, which probably always belonged to the Greek and Latin, corresponds to the superiority of these races in invention and discovery.

The greater number of case endings in Latin than in Greek corresponds to the genius of a race more immersed in practical use of substantive objects, and with a greater tendency in consequence to particular adjustments to objects.

In all the Indo-European languages, the case endings as well as other added elements acquired a peculiar nature as inflections from that unification of elements, which was due to abundant mental energy, according to chap. ii.

15. Bask has many postpositions, which are attached to the stem of the noun, some which govern datives, and some which are connected with the noun by what seems to be an arthritic element (Bask, 3, 4, 7). They have loose connection with the noun (*ibid.* 5), so that though there is considerable sense of relation, there is little skilful exactness of application.

And the inferiority of the language in this respect to the Indo-European, corresponds to the inferior progress of the race; bearing out the general agreement which has been traced in this section with the principles of Book I. chap. iii., 10.

XI.—*Particularising elements are developed according as there is weak concentration of practical aim. The plural number in the noun is favoured by skill in use, and affects the objective part or substance of the noun. Interest in the nature of objects favours the dual number. Concrete fulness of substantive idea renders necessary auxiliaries in counting.*

1. The American nations on the fertile lands about the lower course of the Mississippi found themselves surrounded by abundant natural production and large stock of game. Their instinct was to look out for what could be taken to supply their wants; and to do this required little skill. The productions of the soil and the animals that lived on it attracted their attention everywhere without presenting special aims to be particularly attended to, so that their practical interest was little concentrated on definite objects. And this want of definite concentration of the practical interest is accompanied in the language of the Choctaws, according to the principle of Book I., chap. iii., 11, by an amazing development of the article which follows the noun (Gram. Sk., II. 48, 49). For so general an interest in substantive objects accompanies the substantive idea, that in fixing his attention on an object, the Choctaw is conscious of withdrawing his attention, first from the generality of objects to an object having a certain nature by which it is designated, then from the generality of objects having that nature to one or more of them, and it may be to that particular one or more as distinguished from other individuals among them.

Now it is to be observed that this process of concentrating attention on a substantive object, which is felt as a process, because the practical interest in definite objects does not quite destroy those general interests from which attention is withdrawn, is felt also in Choctaw in thinking a fact; so that a verb also may be affected with an article after it, because there is a general interest in facts as in things accompanying the particular idea.

According to the principle of Book I., chap. iii., 12, the sense of the individuals in a plurality is weak when there is a want of that exactitude in the applications of action or use, which causes these to be thought with completeness up to their objects. This want exists in Choctaw. The verb bears little on the noun. And the only elements of relation in contact with the noun are faint traces of relation in the articles. Accordingly the substantive in that language has no plural form, nor even the third personal pronoun. The first and second persons have plurals on account of the strength of the several personalities, and the first has an inclusive plural and an exclusive, which will be considered in the next section.

But the only other plural in Choctaw is the adjective or verb which belongs to a plurality. This forms a plural sometimes by internal change (Gram. Sk., II. 49, 54); for it is to the individual that the attribute belongs, and in thinking it the sense of the individuals in the plurality is strengthened and taken up into the thought

of the adjective or verb. And there being little sense of substance in the noun (Def. 4), because there is little thought of it as in the relations of action, the manifold individuality is expressed by the inner plural, according to Book I, chap. iii., 12.

2. The Dakota also lived in a fertile region abounding in valuable production, where there was little need for skill in the application of action or use to substantive objects. Their verb consequently does not quite reach to the objects and conditions, nor do their elements of relation (Gram. Sk., II. 42, 43). And there being an habitual want of definiteness in concentrating the practical interest, the sense of things in general gives rise to a definite article and an indefinite or individualising article, both which follow the noun. The substantive forms no plural unless when it means a plurality of men, for it is only then that the interest of the individual is such as to give a sense of the manifold in the plural; this interest being stronger than in Choctaw, as the martial enterprise of the race is greater. The plural ending has weak union with the stem, so that in the persons of the verb, and the possessive affixes of the noun, the personal element precedes the verb or noun, and the plural element of the pronoun follows it. This looseness of connection of the plural element with the stem is usual in the American languages, and corresponds to the want of close application of the action to the object above mentioned. For this, according to Book I, chap. iii., 12, leads him to think the plurality after having thought the object in the singular.

In the first person, however, the plurality falls on the stem of the pronoun and alters it, self being undistinguished from the associated persons. And there is no difference between an inclusive and an exclusive first plural (Gram. Sk., II. 46).

In no other of the American languages studied in this work is there such want of definiteness in concentrating the practical interest on its objects as to produce a pure particularising or individualising article; though in Selish (*ibid.* 66), Southern Sonoran (*ibid.* 77), and Otomi (*ibid.* 79), there is an article, which, however, is rather an arthritic (Def. 7) than a particularising element, connective with the fact rather than distinctive from the general.

3. In Eskimo the closeness of union of the case relations with the stem of the noun indicates the close application of action and use to its objects (preceding section, 7); and this develops, according to the principles of Book I, chap. iii., 12, a sense of the individuals, such as to require a different expression for duality when strongly thought from that which is given to plurality. The duality, however, needs to be emphatic in Eskimo, or it is not distinguished in expression from the plural. The close application also of action develops so strong a sense of the manifold substance that sometimes the attributive part of the idea is imperfectly thought, as when the plural of kayak expresses a kayak and its crew. In this case the kayak is only the principal individual in the plurality; and the mind omits to think the other individuals except in an abstract plurality including it and them (Gram. Sk., II. 12).



4. In Cree the verb is carried on in thought to the objects not closely, yet more than in either Choctaw or Dakota, as is manifest from the great development of elements expressing the energy of the agent exerted on the object of the action (*ibid.* 18). And accordingly, in agreement with Book I., chap. iii., 12, the noun both of the animate and inanimate has a plural ending (*Gram. Sk.*, II. 37). It is remarkable that a noun of the animate, if possessed by the third person, takes the inanimate plural ending. The personality of the third person is so weak, the sense of life in it so low, compared with that of the first or second (*ibid.* 27), that possession by it, implying as it does subjection to it, reduces the sense of life to the level of the inanimate.

The plural ending in Cree is loosely connected with the stem both of the noun and of the personal pronoun, so that though the personal element of the first and second persons precedes the verb in the indicative, their plural element follows it, and when the personal affixes are attached to a noun as possessive, the personal element precedes the stem of the noun, and the plural element of the possessive follows it, the plural element of the noun following that of the pronoun (*ibid.* 37). The plural element of the pronoun, on account of its detachment, has not the connection with the verb or noun that the personal element has, and the latter connection having been established, the plural element follows, and the nominal stem when thus affected with possession is followed by its plural element. This detachment of the plurality corresponds to the small degree in which the hunter thinks the action on into close application to the object (preceding section, 8), according to Book I., chap. iii., 12.

5. In Yakama the case endings of the noun show that the applications of action or use are thought up to their objects, and the noun has a plural ending (*ibid.* 56).

In Selish the noun has no element of case, and the prepositions are very few (*ibid.* 61, 66). The verb is thought not exactly as passing to its objects, but rather as embracing them in its operation (*ibid.* 64, 65), so that there is no sense of application to them; and this being absent the sense of the substance, and also that of plurality, is weak. Only, according to Book I., chap. iii., 12, some nouns denoting animate objects have a plural prefix, others form a plural by internal change. It is remarkable that in Selish the plurality of the third plural possessive is taken up altogether into the noun, and reduplicates the vowel which precedes its last letter. This shows that the noun takes up a sense of its possessor as the Selish verb does of its object, and gets a plurality from the possessor as the verb does from the object.

In Pima also the noun has no element of case, and the words used as postpositions do not combine closely with the noun (*Gram. Sk.*, II. 69). Though the verbal stem is thought in close connection with the objects and conditions, it is detached from the volition of the subject (*ibid.* 68), so that there is little designed application of action to its objects, and little interest in these as objects. Accordingly, the sense of the substance is weak (*Def.* 4), and the formation of the plural of nouns in

Pima is by internal change of the stem (Gram. Sk., II. 69), according to the principle of Book I., chap. iii., 12.

In Otomi the verb spreads into its object without any appearance of a sense of fitting application (Gram. Sk., II. 82), and the noun forms no plural (*ibid.* 79).

6. In Mexican, when the verb does not take up its object but pass to it, the sense of application of action or use falls short of its objects, so that there is a considerable arthritic development to connect the objects and conditions with the verb, and even with the elements of relation which may intervene between them and the verb (*ibid.* 84). There seems, however, to be a considerable number of elements of relation (*ibid.* 85); but great attention to the<sup>a</sup>attributive nature of the noun (Def. 4), so that the sense of it as object is weak. In accordance with this imperfect sense of the application of action or use, only nouns expressive of the animate form a plural; and some of these form it by reduplication, some by merely dropping a subjoined element of particularity, as if, according to Book I., chap. iii., 12, the sense of the individual substance was weak. But others of them form it by changing the particular element which is suffixed to them, and which forms a remarkable feature of the Mexican language (Gram. Sk., II. 87).

The use of these particular or demonstrative elements in the formation of the Mexican noun shows the strength of concentrated attention with which the substantive object is thought; for they do not particularise that object as distinguishing it from a generality, nor are they arthritic. They express attention fixed on the object, and involve a sense of the attributive part of the idea of it, for they are not so abstract as to be the same for every noun (Intro. 3). They are sometimes dropped in the plural, for a plurality is indefinite compared with an individual. But more frequently they are changed in the plural for others of plural significance. Some of them are dropped when the noun takes possessive prefixes, because then the attention given to the substantive object is diminished, being partly taken up by the possessor. But sometimes the noun has to take an arthritic element instead of the element which it has dropped to connect it with the possessive. And on account of the concrete particularity with which the object is thought, the idea often is too full to be used as a unit in counting, and a part of the idea has to be taken instead (*ibid.* 87; V. 6), according to Book I., chap. iii., 12.

7. In Chiapaneca the action is imperfectly applied to its object, for the direct object has to be connected with the verb by a remarkably heavy arthritic element (Gram. Sk., II. 90). And accordingly, only some nouns form a plural (*ibid.* 89).

In Quiché the action is not thought in close application to the object (*ibid.* 94). And only nouns expressive of the animate form a plural, the plural element being subjoined. But adjectives and pronouns belonging to a plurality of inanimate objects as well as of animate form a plural, because it is to the individual that they refer, and consequently they have more sense than the substantive of the

individual in the plurality. Numeral particles or nouns are used in Quiché, as in Mexican, to facilitate counting (*ibid.* 92).

In Maya there is a similar imperfect application of action to its object (*ibid.* 99), and the noun has no plural (*ibid.* 96).

In Caraib it seems to be as in Quiché (*ibid.* 101, 104, 105).

In Chibcha and Guarani there is little sense of the application of action or use to its objects, and the noun has no plural (*ibid.* 107, 117).

But in Quichua and Chilian there is development of number at the end of the noun, corresponding to that of the elements of relation attached to the noun which give so full an expression to the application of action and use to its objects (*ibid.* 110, 142).

In Kiriri the sense of the application of action to its objects is singularly weak, for there is no transitive verb (124); and accordingly the noun is said to have no number. But it appears that personal nouns take *-a* to express plurality, some names of kindred taking *-te* instead of *-a* (*ibid.* 122). This shows a special strength in the sense of personality.

In Chikito also a weakness in the application of action or use to its objects appears in the imperfect construction of the preposition with what it governs (136). And accordingly there is a weak sense of the plural of the noun, so that when the noun governs a genitive its plurality is not expressed. For the expression of the plurality depends on the demonstrative element which is subjoined to the noun as in Mexican, and which is dropped when the noun governs a genitive, because the genitive divides the attention. This element shows that the noun is thought with strong particularity like the Mexican noun. And it is to be observed that as that particularity impeded numeration in Mexican, so in Chikito there is no native numeration (*ibid.* 133). It was not easy to the Chikito, and there was no traffic to make it necessary to him, as it was to the Mexican.

In Bauro there is no expression of relation carrying the action close to its object; and there is little expression of the plural of the noun, the plural ending being little used (*ibid.* 137). So that in all the American languages studied in this work, the principles of Book I., chap. iii., 12, are borne out. And where a plural element is added to the noun it is almost always subjoined, the only exception being in Selish, which shows the interest taken in the nature of substantive objects penetrating the whole substantive idea, so that the substance is thought specialised by it.

8. The fragmentary nature of African speech is most strikingly illustrated in the prefixes of the Kafir nouns (*Gram. Sk.*, I. 2, 3). But though that nature belongs to all the African languages which are remote from Asiatic influence, the system of nominal prefixes detached in concord does not by any means prevail throughout those languages. There are therefore special causes in Kafir speech which bring the fragmentary tendency into play in that particular part of the language.

Now, in the Kiriri and Chikito languages in South America, owing to the weakness of the habitual sense of possession, the possessive

affixes often take a general noun, which includes under it the particular noun which they affect in order to help their connection with that particular noun. And in Kiriri certain classes of adjectives take much more abstract elements in the same way, connecting them with the substantives to which they belong and proper to those substantives, being superficial thoughts of the substantive objects (*ibid.* II. 120, 126, 131).

The Kafir prefixes differ from these South American elements in being parts of the noun instead of being only connectives with the noun. But they agree with these in being partial thoughts of the substantive object. Not in certain connections but generally in every connection, the substantive object is thought in Kafir with a partial disregard of its attributive nature (*Def.* 4). And this introduces in the formation of the substantive idea a difference between the part which, as substance, is thought in the connections of fact and the attributive part which in those connections is comparatively disregarded, bringing into play the fragmentary tendency of African thought.

The effect is increased in Kafir by the strength with which the connections of the constituent members of fact are thought. And the full account of the Kafir noun is, that it is the form taken by the substantive idea where thought is fragmentary, and the race thinks with great interest the uses of things, and with little interest their nature (*preceding section*, 10).

The combination of the members of fact is much weaker in Pul, Bullom, Woloff, and Yoruba, and in these the nominal prefixes are proportionally weak (*Gram. Sk.*, I. 20, 23, 26; III. 183).

In the Oti family the interest lies rather in the objects and conditions of action than in the end at which it aims (*this chap.*, IX. 1), so that though there is a special interest in these, as objects and conditions, which tends to distinguish an objective part of the substantive idea from an attributive part, yet there is not that strength of connection between the parts of the sentence, as all aiming at an end, which in Kafir divides the substantive in forming its connections. The nominal prefixes consequently are reduced in the Oti family, and are not taken up in the concords of the sentence except by the stronger demonstrative pronoun (*ibid.* I. 51).

In some of the Kafir languages also south of the equator a weakening of the nominal prefixes may be observed.

Thus the Bituana, on account of the comparative difficulty of their life, have to give more attention to the attributive nature of substantive objects, and this weakens the nominal prefix (*ibid.* 14).

The Kisuahili and Kinika languages think the substantive part of the noun more as particularised by the attributive part, tending to put the attributive part first (*ibid.* 15). And in Pul this particularisation has in a remarkable way caused the prefix to become a suffix, though leaving behind it traces of its former presence at the beginning of the noun (*ibid.* III. 183).

Those languages which approach the negro region generally have this characteristic feature impaired.

In some of those languages in which the nominal prefix is reduced, it is in the connections of the substantive with other members of the fact that it is best preserved (*ibid.* I. 26 ; III. 184). But this is not so in the Oti family, as above explained.

9. In Mandingo, Vei, and Nubian, there is often subjoined to the noun an element of a pronominal nature expressing an act of attention directed to it, and indicating the interest with which substantive objects are thought. When an adjective affects the noun it divides this interest and weakens in Mandingo the pronominal element. The applications of action are not thought on close to their objects (preceding section, 11), and the sense of plurality consequently being weak in the idea of the plural substantive, it is thought in the act of attention which follows, and is expressed with the pronominal element separably from the noun, according to Book I., chap. iii., 12. As the quality belongs to the individual, the adjective comes between the stem and the plural element, except those adjectives, such as *all*, which belong to the plural aggregate (*Gram. Sk.*, I. 32, 36 ; III. 127, 128).

In Hottentot also there is a pronominal element at the end of the noun. But this is personal, the three persons belonging as an ending to all substantives and pronouns. For the pronouns too, both personal and demonstrative, have a root to which the person ending is attached. All objects in Hottentot enter into the connections of fact as persons, and the personal substance has imperfect union with the root.

Amongst these African races the difference is striking between the Kafir, who thinks actions in their result more strongly than things, the Mandingo, Vei, and Susu, who think things more strongly than actions, and the Hottentot, who sees personality everywhere. The two latter groups put the radical part of the noun first on account of the interest which they take in the nature of substantive objects, and the consequent tendency to make the thought of it precede the whole substantive idea.

10. The Egyptian, like the Choctaw, found himself in a fertile land. And the production which was necessary to supply his wants did not demand the direction of his energies with concentrated attention to special objects. Hence the Egyptian, like the Choctaw, had great sense of the general, and though his thought did not spread on the act of signalising a particular object, because he was an African, not an American (*Gram. Sk.* II. 4), yet he was conscious of separating it from others as an individual, or of specially distinguishing it from others of the same designation. So that in the Egyptian language a substantive was preceded for the most part by a definite or an indefinite article (*Gram. Sk.*, III. 109).

In Woloff also, there is an absence of the direction of energy with concentrated attention to special objects, and objects not being signalised by such direction in the thought of the action are indicated by an element of that kind in an article of position (*ibid.* I. 26). This, however, involves no sense of the general, as the Woloff region on the border of the desert is not one which inspires general interest.

There is in Egyptian a weak sense of the application of action or use to its object, for instead of being thought completely up to its objects it is connected with them by pronominal elements, or relations imperfectly thought as such. And there is a weak sense of the substance and of plurality, as appears from the imperfect development of the plural of the noun (*ibid.* 109, 110), agreeably to the principles of Book I, chap. iii., 12. In general, Egyptian nouns have no plural. Of those which have it, far the larger portion have a plural ending with more or less internal change; the remainder, internal change only.

The plural prefixes of the Kafir nouns do not retain a distinct sense of the individual in the plurality. The prefixes themselves are due, as has been said, to the imperfect attention which is given to the nature of substantive objects in the applications to them of action or use. And the connections of fact formed with such imperfect attention and without much development of relations (preceding section, 10), indicate the absence of exactness in such applications; which, according to the above principle, corresponds with a weak sense of the individuals in the plural. For the Kafir accomplishes his ends rather by his discernment of utility, than by skilful handling of things according to their nature.

In Woloff, the sense of the applications of action and use is still weaker (*ibid.* 10), and the plurality is weaker in the noun. For when the plural noun has the article it gives its plural prefix to the article; which shows that the sense of plurality is helped by the act of attention which the article expresses, and is in that case not noticed in thinking the noun (*Gram. Sk.*, I. 26).

In Bullom the sense of plurality seems to be much as it is in Kafir (*ibid.* 23). But in the Oti family it is weaker (*ibid.* 51); just as the application of action or use to its objects is less close (preceding section, 10). And in Yoruba there is no plural (*Gram. Sk.*, I. 20); as there is no combination in the sentence, arising from close application of verb or preposition to the noun (*ibid.* 22).

In Pul, the plural is expressed like the Kafir plural, only that the prefixes have become suffixes (*ibid.* III. 183).

In Mandingo, Vei, and Nubian, there is, as has been said before, an expression of plurality, which affects the separable pronominal suffix. Susu has less plurality, as action has less volition, and therefore less exactness of application (*ibid.* I. 32, 36, 50; III. 127, 128).

Hottentot has singular, dual, and plural numbers (*ibid.* I. 64). But this is due to the personal substance which belongs to all the nouns and pronouns; and which, according to Book I, chap. iii., 12, favours the development of number.

The Barea and Bari substantives seem to involve a sense of substance (*Def.* 4), particularised by the attributive part of the idea, and so far separable from it that they afford footing for a plural ending (*Gram. Sk.*, III. 137, 138, 152); but Bari less than Barea.

But in Dinka and Galla this does not appear. And in Dinka there is an inner plural, in Galla scarcely any plural; there being

more elements of relation in Dinka than in Galla to carry on the applications of action and use to their objects (*ibid.* 144, 162).

The Kanuri substantive tends to have a substance distinct from the attributive part. In abstract nouns it is a strong element prefixed to a verbal or nominal stem; and these abstract nouns, owing to their signification, form no plural. In other nouns a plural element is at the end. But plurality is often unexpressed (*ibid.* 173); for the applications of action or use are not carried close to their objects, as appears from the separability of the postpositions of case from the noun.

Thus in the African languages generally the development of the plural is according to the principles of Book I., chap. iii., 12.

11. The Polynesian lives as the Choctaw did (1), amid manifold spontaneous productions of nature, and the conditions of his life do not require concentration of practical aim in the direction of his energies. In fixing his attention on the objects with which he is concerned, he is conscious of singling an individual or of distinguishing it from others of the same designation, or from those which are not of the same designation; and he uses before his substantives an indefinite article which individualises, or a definite article which particularises or else distinguishes the object from those which are not so designated, being sometimes applied in the latter use to a proper name. There is also an emphatic article which brings with it a sense of particularisation, and therefore requires always to be accompanied by the definite article (*Gram. Sk.*, III. 3).

In Polynesian there is a remarkable deficiency of truly connective elements to bring action or use into close application to its objects (preceding section, 1), and there is corresponding weakness in the sense of the individuals in a plurality, according to the principle of Book I., chap. iii., 12. So that only in a few instances a plural is formed; and in them by internal change, the substance being weak (*Gram. Sk.*, III. 4). The definite article, however, has a plural; the manifold individuality being felt in the act of attention which the article expresses. Substantive objects being little thought as objects of action or use, the substantive idea involves little of that sense of substance (*Def.* 4) which distinguishes the substantive from other parts of speech, and there being a similar absence from the stem of the verb and from the adjective of what is distinctive of them (this chapter, III. 2; IV. 1; IX. 5), the same word may be used as substantive or verb, or to qualify as adjective or adverb (*Gram. Sk.*, III. 5).

12. Passing from the Polynesian to the Melanesian languages through Tongan and Fijian, we find in both of these latter a diminished development of the article, each having only one article, besides the emphatic article. This one article merely directs attention to the substantive object as an entire object of thought (*Def.* 4), without defining it or distinguishing it from others, its function being reduced to that of supplying the want of a substance in the substantive idea. And the emphatic article does not bring with it a sense of particularisation, so that it may be used without being accompanied by another article (*Gram. Sk.*, III. 16, 1; 17, 3).

In the Melanesian languages generally there is less development of the article before the noun than in Polynesian; and this is in accordance with the principle of Book I., chap. iii., 11. For those languages bear the traces, like the people which speak them, of being in their origin connected with regions in which the production of things needful was less abundant, and in which somewhat more concentration of practical aim was needed that the race might flourish there (preceding section, 2). Still they do not think the applications of action and use close to their objects; and the parts of speech are as little distinguished as in the Polynesian. The article, however, though it involves less distinction of the object from other objects than it has in Polynesian, is more expressive of attention directed to the object as an object than in Polynesian; and this agrees with the features of the Melanesian languages which have been noted in preceding section, 2. It also agrees with the expression of plurality of the substantive. For, in accordance with the principle of Book I., chap. iii., 12, the stronger reference of action or use to its objects which is to be seen in Melanesian is accompanied by a higher sense of the plural. The plural is often expressed in Melanesian by a separate element involving a distinct act of attention to the noun, and generally preceding it (Gram. Sk., III. 21, 24, 28, 34, 37, 40). This, though greater expression of plurality than is in Polynesian, does not in general belong to every noun, except in Maré, which thinks substantive objects with more interest than the other languages (*ibid.* 37).

In Maré, also, there is a definite and an indefinite article, and the Polynesian emphatic article *ko*, which is used in Maré with the indefinite as well as with the definite article; so that it does not bring with it particularisation as in Polynesian. Moreover, *ko* is found with the direct object also in Maré; which use, though it is exceptional, corresponds to the stronger sense of the object in the Melanesian languages (preceding section, 2). And there is a weaker emphatic article, *ono*, used with both subject and object, and also with the genitive and other cases, and a still weaker *o* used with the object, and exceptionally with the subject (Gram. Sk., III. 34). It appears, therefore, that there is in this language somewhat more particularisation than in the other Melanesian languages, though less than in Polynesian, the emphatic article of the object indicating also more interest than Polynesian has in the object.

The separate plural corresponds to a want of close application of action, which leaves the plurality to be thought in a second act of attention to the plural object. But still it gives more expression of plurality than is in Polynesian, and there is also a partially developed dual; and this corresponds with the higher sense than in Polynesian of the applications of action and use to their objects, according to the principles of Book I., chap. iii., 12.

13. In Tagala, though there is an excessively weak sense of relation, there is a certain degree of attention in applying action and use to their objects (preceding section, 3); and there is a separate plural element, as in the Melanesian languages, preceding the noun and



pronoun (Gram. Sk., III. 51). This application, however, is not thought in immediate connection with the noun, but generally through the mediation of pronominal elements. And the noun, in consequence, has so weak a substance that it needs an article which, without particularising it, expresses attention directed to it as an entire object of thought (Def. 4).

14. In Malay there is less combination of action and use with its objects, but more relation, though imperfectly connected, and less strength of practical aim, and in accordance with these features respectively there is somewhat less expression of plurality, less objectivity connected with the noun, no objective article to supply that element, and some particularisation (Gram. Sk., III. 72, 73).

There is little difference between Malay and Polynesian in the sense of plurality, as there is little difference between them in the reference of action and use to their objects. Moreover, they both have a concrete fulness of thought (*ibid.* 8, 80). And in Malay, this causes the substantive idea to be too heavy for counting as a unit, and a portion of it is used instead.

In Polynesian, substantive objects are thought with less strength of interest, because what the Polynesian needs he has more readily than the Malay. His substantive therefore is light enough to serve as a unit. Yet it is concrete enough to burden the act of counting so as to make this felt in Polynesian as an element of succession, and consequently to interpose between the noun and the number an element of verbal process (*ibid.* 6, 12). In Melanesian, the numeral is preceded by a heavier element of counting, and is most cumbrously expressed; as if there was little traffic, and therefore little expertness in numeration (*ibid.* 36, 1). It is probably due to the concreteness of the unit, that in Fijian there are different nouns for tens of things of different kinds, and others for hundreds (*ibid.* 17, 3).

15. The Australian carries his application of action or use close up to its objects, attaching postpositions close to his nouns (preceding section, 2), and he has not only a plural number, but also a dual (Gram. Sk., III. 85, 86).

In Tamil, the action is not closely applied to its object by a pure element of relation closely attached to it; and there is little sense of number (*ibid.* 97, 100).

In Australian, in Tamil, and in the languages of Northern Asia and Northern Europe, the radical part goes first in nouns and verbs because these races have to give strong attention to the nature of things and to the modes of action.

16. The conditions of life in Northern Asia and Northern Europe render necessary for the most part such an attention to the objects with which life is concerned, as causes action and use to be thought in closer application to their object than in Tamil. And there is in those languages more expression of the plural; while in the most northern of them, the Northern Samoiède dialects, in which the difficulties of life require action and use to be thought with closer application to their objects, and in which accordingly the element of

case gets in between the stem of the noun and the element of number (preceding section, 6), the substantives and personal pronouns have a dual as well as a plural (Gram. Sk., IV. 8, 70, 83, 128, 139, 148, 157). The personal pronouns in Ostiak and Lapponic being of stronger individuality than the noun, have a dual and plural, and the nouns also in Surgut Ostiak (*ibid.* 103, 104, 159). In Mongolian, however, and Manju, the postpositions, which are few, have loose attachment to the noun (preceding section, 5), and the plural has corresponding weakness (Gram. Sk., IV. 36, 59). In Turkish also, the postpositions have loose attachment, but there are more of them, which shows a higher sense of relation. The noun in consequence of higher sense of relation is thought more distinctly as object; and accordingly there is a strong sense of plurality (*ibid.* 8, 19).

17. The Hungarian only has developed an article, and the use of this corresponds to the variety of resource which always characterised the race (this chap., III. 5), and to the consequently diminished concentration of practical aim which would be especially natural to them when they came to their present fertile region (Gram. Sk., IV. 112). It has no proper case ending, as if there was little need for skill; and its sense of plurality is proportionally weak (*ibid.* 113).

18. The Chinese and Siamese nouns have no plural, just as, according to the principle of Book I., chap. iii., 12, there is in Chinese and Siamese no sense of a close application of action or use to its objects (preceding section, 12), as is indicated by the absence of organic connection of the parts of the sentence and of pure elements of relation (Gram. Sk., V. 8, 16).

The Chinese and Siamese, in accordance with their intense definiteness of practical aim, use no article.

They think substantive objects with such concreteness that the substantive idea is too full for counting as a unit, and a part of it has to be taken for that purpose (*ibid.* 6, 16).

This peculiarity belongs also to other races in this part of the world, the Japanese, the Burmese, and, as has been mentioned before, to the Malay. But it is in the Chinese that it may best be studied. For that concrete particularity of thought to which it seems to be due is manifested most strikingly in the Chinese. This tendency of thought is involved in their intensely realistic character, their want of analysis and abstraction, their unaptness to single out a cause or a condition and generalise its connection with a result, their consequent imitativeness in the concrete of what is found useful, their keenness in finding what may profit them. These all show an absorption of interest in concrete reality which is at the bottom of most of the peculiarities of Chinese thought, and of the Chinese language. For though the intermediate degree of quickness which belongs to the former gives singleness to the elements of expression in the latter (*ibid.* 13), yet that singleness is heightened by the concrete particularity of Chinese thought. The imitativeness which springs from this has been already connected with the absence from the Chinese verb of elements of person, succession, tense, mood, voice, and derivation

(this chap. III. 3 ; IV. 5 ; V. 2 ; VI. 6 ; VII. 8, 17), and from the Chinese noun of elements of case, as well as from the language of pure elements of relation (*ibid.* X. 12), and now as a consequence of the want of that carrying on of the thought of action or use into close application to its objects which arises from the same cause (*ibid.* X. 12) has been noted the want of elements of number in the noun. Moreover, by the concrete particularity with which the substantive idea is thought, the singleness of the noun is increased, for the distinction between an attributive part as general, and a substance as particular (Def. 4), is thereby well-nigh abolished. And thus the intermediate quickness of thought is helped in giving absolute singleness to the Chinese verb and noun.

Now the substantive thus thought has too much concrete fulness to serve as a unit in counting substantive objects, and a noun or particle expressing part of the idea is used, whose meaning is light enough for that purpose.

The Siamese, Burmese, and Japanese races partake in different degrees of the peculiar nature of Chinese thought, probably owing to the action of similar influences, and the Malay also seems to share that concrete particularity of thought to which probably the use of the numeral particles or nouns in counting is due (*Gram. Sk.*, III. 73, 80 ; V. 23, 44).

All these races find what they want supplied by nature to them when they look for it with care. They have little need to study the properties of things and the efficiency of actions, so as to know the essential conditions of success in the use of means and in the conduct of operations to attain their ends. Such rudiments of natural law are needed for invention. But these races have not to invent, but to find. And the concrete particularity of sense is stamped upon their thought and language.

The Mexican and Quiché also seem to have a strong particularity of substantive idea indicated by the pronominal endings of their nouns ; and this, though perhaps different in its origin, yet leads to a similar result (*Introd. to this chap.*, 2, 3 ; *Gram. Sk.*, II. 87, 92).

In Burmese, Japanese, and Tibetan, there are postpositions attached to the noun, and accordingly there is sufficient sense of the application of object and use to their objects to maintain a sense of plurality, though not sufficiently close to give a sense of it in the idea of the plural object. The plural element follows as a separate element, referring to the noun in a second thought of it, and is followed by the postposition. In Tibetan the adjective follows the noun, and is followed by the element of plurality (*ibid.* V. 22, 32, 33, 41). These constructions all agree with the principles of Book I., chap. iii., 12.

The singling particles which follow the noun are a remarkable feature in Burmese, Japanese, and Tibetan (*ibid.* 24, 32, 41). They seem to be of a similar nature to the emphatic article in Polynesian, and, like it, to express an emphasis due to the position of the noun in the fact. Their use must be due to the want of distinctive expression of such function of the noun in the sentence, so that they may be

compared in some respects to the use of a pronominal suffix to mark the subject (this chap., I. 1). They seem sometimes to be arthritic. Tibetan has also an article which follows the noun, and which, like one that precedes it in Melanesian, marks out the noun as such, directing attention to it as an entire object of thought (Gram. Sk., V. 32).

19. In the Syro-Arabian and Indo-European languages, the development of number and the use of the article follow the principles of Book I., chap. iii., 11, 12.

The peculiar genius of the Syro-Arabian languages is to be seen most clearly in Arabic. For it is to the desert that it is due; and in the desert, therefore, it is to be found in its highest purity. The difficulties of the desert require a degree of skill and ingenuity in the treatment of substantive objects; and consequently Arabic has case endings which evidence a thought of relations in close application to the substantive idea. But, at the same time, the possibilities of production, acquisition, or use, are extremely limited in the desert, so that the practical application of action to object has a very restricted range. Substantive objects are consequently more the objects of thought, and less the objects of action and use, than in other regions. The substantive idea is thought more in the attributive part which designates it to the mind, and less in the objective part or substance in which it is apprehended in reference to action (Def. 4), than in any other Syro-Arabian or Indo-European language. In Hebrew, though there is less relation and less closeness of application to the noun, because the difficulties of the region being less there was less need for ingenuity and skill, yet, owing to the larger supply of useful objects, the substantive was thought more in reference to use and action, and the interest of the substantive idea was less concentrated in the attributive part, and it strengthened the substance. This change of thought which took place in Hebrew on the edge of the desert was carried still further in the regions outside the desert in Syriac and Ethiopic.

In Arabic the substantive being thought principally in the attributive part of the idea, it is in that part that the manifold individuality of a plural is thought. And this being too heavy to be carried with distinctness through a large number, the plural idea changes rapidly from two to the higher numbers. A dual is developed, and in general the distinction of the individuals is impaired when the number exceeds ten, so that they merge in an aggregate with various alterations of the attributive part of the idea. Even in the lesser numbers, the plurality of feminine nouns is thought in some degree as a mere extension; and only in masculine nouns is it thought with a due sense of manifold individuality, this being apprehended in the individual differences of the attributive nature, and then referred to in a plural pronominal element. Even the dual is similarly thought with a subsequent pronominal act of attention. The attributive part being thought with such interest precedes the substance, and therefore also the element of number (Gram. Sk., V. 59, 62).

In Hebrew the plurality is thought sufficiently in the attributive part of the idea to make a difference to be felt between the plurality

of two and that of higher numbers, so that a dual is formed. But in the higher numbers it is thought in the substance, this being strong enough to take it up. And even in a plurality of two, the substance is apt to take up the twofold individuality, so that this is expressed in the general plural form, unless the objects be such as by nature or art exist in pairs so as to have duality associated as an element in the idea of their nature. The substance, however, in Hebrew nouns is not such as to furnish a very distinct sense of manifold individuality, so the plural form may be used to express merely extension or greatness (*ibid.* 82). And ideas being more objective than in Arabic, there is not sufficient strength in the sense of personality to support a dual form of personal pronouns, the second and third expressing a plurality of two objectively in their substance by the general form instead of having a dual form as in Arabic. The sense of self in Arabic overpowers that of a person associated with self, and makes it be thought weakly, as in plurality, so that there is no dual of the first person (*ibid.* 51).

Syriac and Ethiopic have only some traces of a dual. The strength of the substance is seen in Syriac in the feminine plural, which, instead of being a mere extension of the stem, as in Hebrew and Arabic, adds an element as if the thought of the individuals remained distinct in the plural, and that of the plurality was added to it. In Ethiopic, also, the plural element of feminine nouns is added to the singular stem (*ibid.* 106, 130).

In Amharic, Tamachek, and Haussa there is no dual. The plural is formed by a subjoined element in Amharic (*ibid.* 143). Tamachek shows African influence in using also prefixes in the formation of the plural (*ibid.* 152). Haussa forms the plural by subjoined elements, or by inserting *a* before the last syllable (*ibid.* 166).

The construct state of the noun which is so characteristic of Arabic and Hebrew is due to the weakness of the substance of the noun (*ibid.* 69, 83, 88, 89). And when the language came out of the desert and became more objective, the substance became stronger and the two correlative nouns more distinct in Syriac (*ibid.* 114), Ethiopic (*ibid.* 131), Amharic (*ibid.* 143), Tamachek (*ibid.* 153), and Haussa (*ibid.* 166).

Arabic and Hebrew, which have less of an objective practical character than the other languages that belong to regions giving more scope to practical habits, use a definite article, in accordance with their want of definiteness of practical aim. The other languages have no article, except that the Syriac has an emphatic article, which follows the noun because it does not determine and limit the substantive idea as the Hebrew and Arabic article does (*ibid.* 112). It probably, like the Polynesian emphatic article or like that of Burmese, Tibetan, and Japanese, expresses sometimes an emphasis due to the position of the noun in the fact. Thus a cardinal number is emphatic after its noun but not before, being strengthened when it follows by the sense of the noun which it then involves. But when the emphatic form is used for a superlative it has a strength of its own not derived from its position in the fact (*ibid.* 110, 114).

20. In Sanskrit substantive objects were thought so strongly both in the attributive part of the idea and in the substance, that two of the same were thought with a fulness which could not be carried through a larger number, and it consequently developed a dual as well as a plural, not only in the noun but also in the personal pronoun. The nature of things was thought with such interest that it went through the whole idea so as to specialise the substance and cause the radical part to take the lead in the substantive.

Both Latin and Greek acquired more generality than Sanskrit (see next chapter). Both the attributive nature and the substance of the substantive were thought with less fulness of particularity. But the attributive part retained more strength in Greek, the substance in Latin. For the practical genius of the Latin led him to think substantive objects more as objects of action and use, than the Greek who was less immersed in utilities. The spirit of the Greek, more free from the particularities of practical application, had more interest for the nature of things. And the attributive part of the substantive idea being stronger with him than with the Latin, he thought objects so fully when there were only two of the same, that he retained the dual; which the Latin dropped, because the Latin thought a duality and a plurality alike in the substance or objective part.

As the Indo-European had a stronger sense than the Syro-Arabian of personal power in directing the life (this chap., I. 2), so he had more sense of the inner personality in the personal pronoun. And in consequence of this fulness of individual personality, the dual was carried throughout the personal pronouns in Sanskrit. As thought became less particular, it was weakened; and Latin, being so objective, lost it in the pronouns as in the nouns. Greek retained it except in the first person of the verb, in which it was lost, because the sense of self as subject overpowered that of the associated person and reduced it to the weakness of a plural element. When, however, self was thought more objectively as in the separate pronoun, and as a person of the middle or passive, in both which it is object as well as subject, it had not this effect; and the two were thought with the fulness of the dual.

Gothic seems more objective than Greek, and like Latin had no dual of the third person or of the noun. But it had such a sense of the person associated with self, and of the second person, that it had a dual of the first and second person in verb and pronoun (Gram. Sk., VI. 154, 158).

21. Latin shows much more sense of practical use of things than Greek (preceding section, 14). And the Latin genius was much more practical than the Greek. And hence it was that, according to the principle of Book I., chap. iii., 11, the Greek made such use of the article with the noun and of particles with the sentence as distinguish his language in so marked a manner from Latin. He had less concentration of practical aim and more tendency to general thought than the Latin.

22. Bask also has a definite article subjoined to the noun, as if the

race had not a strong definiteness of practical aim. It appears from the loose connection with the noun of elements of relation, that there is little closeness of application of action (preceding section, 15). And accordingly the noun has a plural only when affected with the definite article (Gram. Sk., Bask, 3), agreeably to the principles of Book I., chap. iii., 12).

So that the principles 11 and 12 of that chapter hold through all the languages, and harmonise all the facts to which they refer under general statements of correspondence with the life which is suited to the region.

XII.—*Is the inclusive and exclusive first person dual and plural connected with need for help in the life of the race?*

The Polynesian language is remarkable for the strong sense of personal individuality which it evinces. Thus proper names and personal pronouns are thought with such strength and independence that they need an arthritic element (Def. 7) to put them in a relation; but they do not need it as possessors nor do the personal pronouns as subjects, these being relations natural for persons (Gram. Sk., III. 3). The distinction also between active and passive possession indicates a strong sense of personal activity (ibid. 4). The personal pronouns have a dual as well as a plural, and in both dual and plural the first has forms inclusive and exclusive of the persons addressed (ibid. 5).

In Fijian the personal pronouns have four numbers, singular, dual, small plural, and large plural, and the first has inclusive and exclusive forms in the three last numbers (ibid. 17).

The Melanesian languages also have kindred features. The personal pronouns have the singular, dual, trial, and plural numbers, showing a sense of personal individuality stronger than the Polynesian, and in the three last numbers the first person has inclusive and exclusive forms, in Annatom (ibid. 21), Erromango (ibid. 24), Tana (ibid. 26), Sesake (ibid. 28), Ambrym (ibid. 31), and Vunmarama (ibid. 32). In Maré (ibid. 34), Lifu (ibid. 37), Bauro (ibid. 41), and Mahaga (42), they have the singular, dual, and plural, and the first has inclusive and exclusive forms. In Fijian and Ambrym there are three general nouns which denote respectively property, food, and drink; and these subjoin the personal possessive suffix, and are followed by the particular noun which denotes the particular possession. In Ambrym this noun is followed by the particle *ge*, as if to particularise the connection as that of possession. Nouns in Ambrym which do not come under these categories take themselves the possessive suffixes and are followed by *ge*. Nouns denoting members of the body take the suffixes and dispense with *ge*. Some nouns seem to take after the suffixes not *ge* but *im* (ibid. 31).

In Annatom, only personal nouns take a plural element before them (ibid. 21).

In Maré and Lifu proper nouns and personal pronouns are treated

differently from common nouns, apparently as if they had more definiteness (*ibid.* 34, 37). There is also in Tagala an apparently similar distinction between proper and common nouns (47). And the first person plural has inclusive and exclusive forms, but there is no dual personal pronoun except *kitu*, I and thou (*ibid.* 51, 52).

In Malay of Sumatra the personal pronouns have no dual or plural forms, except the first, which has an inclusive and an exclusive plural.

In Dayak the first has a dual and all of them plurals, the first an inclusive and an exclusive plural, the distinction, however, not being strictly observed (*ibid.* 74). There seems to be no distinction in nouns with reference to personality.

In Tamil there is strong distinction between personal nouns and non-personal, which appears most clearly in the demonstrative pronouns referring to them. The personal pronouns have a singular and a plural, and the first has inclusive and exclusive forms (*ibid.* 97, 98).

In Hottentot personality is so universally imputed to substantive objects that all substantives and pronouns take the personal suffixes, and in the relations of action and fact are thought as persons. The personal pronouns have the singular, dual, and plural numbers, and the first has inclusive and exclusive forms, which are distinguished by different roots bearing the first plural and dual suffixes (*ibid.* I. 64, 67).

Some of the American languages also have inclusive and exclusive forms of the first personal pronoun plural.

In Cree these are found along with a distinction between the plural forms of nouns of the animate and of the inanimate, a more remarkable distinction of the verbs which have an animate object from those which have an inanimate and a sense of a stronger personality in the subject than in the object, in the second person than in the first, and in the first than in the third (*ibid.* II. 18, 26, 27, 37).

In Choctaw the first personal pronoun has the twofold plural, and the second has a plural, and there is no other plural except in the adjective or verb (*ibid.* 49, 54).

In Quichua not only has the first personal pronoun the twofold plural, but there is a great variety of plural elements which may be subjoined to nouns (*ibid.* 110, 112).

In Kiriri and Chikito, which have the same feature, the personal pronouns as possessors do not readily combine with certain classes of nouns as possessed, and take abstract nouns to facilitate the connection. In Kiriri personal nouns only form a plural, and in Chikito nouns of the animate are exempt from entering into compositions (*ibid.* 122, 123, 126, 131, 134, 136).

Of the other languages studied in this work, Guarani in South America, Pul in Africa, and Manju in Asia, have an inclusive and an exclusive plural of the first personal pronoun (*ibid.* 118; III. 185; IV. 60).

This double first plural which is thus strangely scattered through different languages is accompanied in them by different features, which, though they may seem to be connected with it in each separate



language, are yet shown by their not accompanying it in others to have no connection of causation with it.

In the Polynesian and in the Melanesian languages it is accompanied by a strong sense of personal individuality, stronger in the latter than the former. This seems to belong naturally to the inhabitants of these islands, in which there is so little life besides human life; and in which, therefore, the ordinary interest in human personality is heightened by the interest in almost exclusive life. The Polynesian was more active than the Melanesian, the Melanesian less bold than the Polynesian; and while to the latter there was more interest in possession for active use or inactive experience, to the former the individual person was a more potent influence. They both distinguished the individuals in the personal pronouns according to their sense of personal individuality, and to this corresponds the development of number in those pronouns.

In Malay there is no such special sense of personal individuality, and therefore not such a development of number in the personal pronoun. Yet to it and Polynesian belong in common the exclusive and inclusive plurals of the first person.

In Tamil the interest is not so much in the personal individual as in the personal nature, thought in contradistinction to the non-personal. And this seems to point to the great struggle in India between man and the beast; which would necessarily give a special interest to rational beings.

The indolent Hottentot lived on his herds without caring to subdue nature and bend it to his purposes; and to him, therefore, it retained the personality which man attributes to it till he finds it passive to his will.

To the hunting Cree the capture of the animal was the necessary labour of life. And this imparted a special interest to the animate and to energy expended on an animate object. It also gave a sense of lower vitality to the object of action, and a keen sense of present life which strengthened the thought of the second person.

Now to all these various races co-operation was most necessary in their various difficulties, to the islander navigating the ocean, to the Indian in his struggle with the beasts, to the Hottentot looking for help to spare himself, to the American hunter of large animals in herds.

With the industrious Choctaws, the laborious Peruvians, and the careful and timid Guarani, co-operation had similar value. And with all those races this might give vivid distinction to the persons associated with self, according to the principle of Book I., chap. iii., 13.

But as to the Kiriri, Chikito, Pul, and Manju, there is nothing known which gives support to the principle, and it cannot be regarded as more than a conjecture.

XIII.—*Gender tends to be distinguished as masculine and feminine, the more the race is dominated by the powers of nature.*

1. The nature of grammatical gender, as explained in Def. 16, is strikingly illustrated by what has been said of Teutonic gender in Gram. Sk., VI. 164; and also by Arabic and Hebrew gender (*ibid.* V. 58, 81, 82).

2. It is also worthy of note that as the Syro-Arabian races subdued nature to their purposes less than the Indo-European, the living power which they perceived in things is less restricted than it was in the thought of the latter, according to the principle of Book I., chap. iii., 14. For the Syro-Arabian had no neuter; every substantive was to him masculine or feminine. Owing to this strong sense of living force also, the personal pronouns and the person elements, subjective, objective, and possessive, had the two genders (Gram. Sk., V. 51). Yet there was a strange uncertainty sometimes in the agreement of the verb or pronoun with the substantive in gender. There was a similar uncertainty of agreement with it in number. And both arose from the same cause which produced the weakness of the substance in the substantive idea (this chapter, XI. 19), namely, the weakness with which it was thought in the connections which combine the members of fact (Gram. Sk., V. 72, 96).

The strong Teutonic race submitted less to nature, dominated it more than the Greek and Latin, and tended more to the neuter gender (*ibid.* VI. 164).

On the contrary, the modern Celtic, Lithuanian, and Romance nations (chap. iv., 12) gave up the neuter gender as they tended more to submit and accommodate themselves to the world around them (Gram. Sk., VI. 109, 183); but the Slavonic, like the Teutonic, tended to the use of the neuter (*ibid.* 220).

3. The apparent anomaly of the Syro-Arabian numerals, above 2, having the masculine form with feminine nouns, and the feminine form with masculine nouns (*ibid.* V. 63, 85, 108, 133), also illustrates remarkably the nature of gender. For masculine nouns being more easily counted on account of their stronger individuality, the thought of their number engages less mental energy, and admits a co-existent sense of the objects counted. This causes the number to be thought as a subordinate appendage to the objects, and therefore as feminine. Whereas feminine objects being less easily counted by reason of their weaker individuality, the number engages more mental energy and leaves less room for a co-existent sense of the objects, and the number consequently is not reduced to a subordinate idea and does not take the feminine form. This curious feature is due to the weakness of the substance of the Syro-Arabian noun rendering so faint the individuality of the feminine; and therefore it does not appear in the Indo-European languages. But in these too may be observed a difference in the substantive strength and gender

of the numerals, according to the degree in which they engross thought so as to draw it from the objects counted.

4. Thus in Sanskrit the first four numerals, like the first two in Arabic, admit so strong a co-existent sense of the objects counted, that they are adjectives agreeing with the noun in gender, number, and case. The numerals 5 to 10 admit such a sense of the objects that in the oblique cases they take the plural case endings, which do not distinguish gender; but in the nominative and accusative they are thought as combining with the noun, and drop the final *n*. The case elements of the nominative and accusative are too weak to impress themselves on the numeral, because the latter engrosses the mental energy too much to admit a full sense of the objects counted; and for the same reason the gender of the objects counted is not felt in those numerals. The multiples of 10 are so far separated from the objects numbered that they are substantives singular in apposition to these. But they still admit such a sense of the objects that they are thought as subordinate to them and are feminine. The numerals for 100 and 1000 so engage the mental energy that they are quite abstracted, and therefore (Def. 16) they are neuter (Gram. Sk., VI. 6).

The Teutonic numerals 1 to 9 are found declined as adjectives agreeing with their nouns, but those for 10 to 19 in Gothic and Old High German were declined as plural substantives masculine; and the higher numerals are less abstract than in Latin and Greek, as Teutonic thought tended to embrace a larger object in its ideas (*ibid.* 153, 173), and consequently retained more sense of the objects counted.

Sanskrit also had greater largeness of idea than Greek and Latin (*ibid.* 45), and the numerals in these had become by use more general and detached from their particular application; in these, therefore, the numbers above 4 were abstracts, and 4 in Latin; for it engrossed the mental energy more than 4 in Greek, as if counting was easier to the Greek. The multiples of 100, which in Sanskrit were summed in totals, were in Greek and Latin plural adjectives, characterising individuals as belonging to or constituting the numbers, rather than comprehending them in counted aggregates. For neither Greek nor Latin could readily comprehend so large a thought, and consequently it was not distinctly formed. The objects numbered were not summed up into a total. They were merely counted in succession; and they left a sense of plurality, because the numeration was not completed by thinking distinctly the aggregate number.

5. It is very remarkable that outside the Syro-Arabian and Indo-European families grammatical gender is found in none of the languages studied in this work except Egyptian, Bari, Galla, and Hottentot (*ibid.* I. 64; III. 109, 152, 162).

Now, although there is a strong affinity between the Egyptian and Syro-Arabian personal pronouns (*ibid.* III. 112), and striking marks in Galla of original connection with the Syro-Arabian, there is a total difference from Syro-Arabian in the structure of these languages; and they must have a tendency favourable to gender or it would not have been preserved in them, even if it came to them

originally from Arabic; while in Hottentot no community with Arabic can be supposed.

It has been observed above that according to the principle of Book I., chap. iii., 14, the Syro-Arabian had more sense than the Indo-European of the living force in nature which gender expresses, just as he subdued nature less to his purposes. And amongst the other races of the world none dominated nature less than the African nomads, who lived dependent on their herds, fed for them with no effort on their part; and the Egyptians, sustained by the abundant produce of the soil which was watered for them by the Nile. So that the development of gender by these races is in accordance with the principle of Book I., chap. iii., 14.

6. The variableness of the gender of Hottentot nouns according to their applications, corresponds to the partial detachment from the root of the noun of its personal substance (this chapter, XI. 9), to which the gender belongs (Gram. Sk., I. 64).

XIV.—*The degree of synthesis in the sentence corresponds to the interest with which the race looks to results.*

The Tagala, in its use of the passives (Gram. Sk., III. 57), shows plainly that the principal interest of fact in that language lies in its end or result. And this is accompanied by an extraordinary synthetic tendency (ibid. 58, 59), according to the principle of Book I., chap. iii., 15.

Something of the same kind is to be seen in Sanskrit; in which the prevalence of a passive construction is noted as the most remarkable feature of its syntax; the passive participle, which expresses completion without passive subjectivity, usually taking the place of the past tenses of the passive verb (ibid. VI. 42).

And along with this tendency to think fact in its completion, is found in Sanskrit the remarkable degree in which each word runs into the following one, and in which compounds are formed of syntactical combinations (ibid. 2, 39).

Latin is free from this tendency to run one word into another; but Greek is remarkable for the separateness of its words (ibid. 60). And while Latin gives no such evidence as Sanskrit of a predominant interest in the result, the character of the Latin race, so much more practical than the Greek, exhibits an interest in results which quite corresponds with the greater synthesis of the Latin sentence.

The synthetic tendency in Teutonic (ibid. 163), which, though very much less than in Sanskrit, is yet remarkable, may be correlated in the same way with the synthetic conception of fact which may be seen in the remarkable constructions in which German sums up a fact by inserting it all between a simple verb and a separable prefix belonging to that verb, or between an auxiliary verb and a participle or infinitive which forms with the auxiliary a compound tense. For this seems to indicate that the German has a strong interest in fact as

summed up in its result; which would correspond with the persevering thoroughness of the race in carrying its work to completion.

Even in Chinese there is a tendency to the formation of compounds, and also to the summation of fact, as if from an interest in its total result (*ibid.* V. 5, 12), corresponding to the practical bent of the race.

The differences which have been observed among the American languages in respect of synthetic construction seem to arise from the various degrees in which the races think fact in the result (*ibid.* II. 5, 64, 144).

Amongst the African languages the Kafir tends to synthesis in accordance with the practical genius of the race (*ibid.* I. 7).

And the principle of Book I., chap. iii., 15, agrees with the structure of language viewed in connection with the mental habits of the race so far as these can be made out.

XV.—*Utterance of the consonants with strong pressure of breath from the chest corresponds to strength of purpose in the race, their hard and full utterance to laborious and active habits respectively, their unrestricted concurrence to versatility, their predominance over the vowels to thoughtfulness.*

1. The phonesis of the African languages of the south and west is remarkable for the weak pressure of breath from the chest with which they are uttered (*Gram. Sk.*, I. 8, 24, 35, 57; V. 141). And this mode of utterance, when affected with the indolence of the Hottentot, produced the clicks (*ibid.* 74). On the east of Africa a weak pressure of breath from the chest has been noted by Lepsius in Nubian, and may be observed also in Galla (*ibid.* III. 126, 161). And it seems to characterise more or less all African speech. Now the opposite character of utterance, with strong pressure of breath from the chest, prevails similarly in the languages of North America (*ibid.* II. 11, 44, 52, 57, 60, 68, 78), and is found in Kiriri in South America (*ibid.* 121). But in Guarani the pressure seems to be weak (*ibid.* 116).

Maori seems to have more pressure of breath than Hawaiian or Tahitian (*ibid.* III. 2).

The Dravidian phonesis has full pressure of breath from the chest (*ibid.* 92).

The Arabic has strong pressure (*ibid.* V. 50), Hebrew less strong (*ibid.* 75), Syriac stronger than Hebrew (*ibid.* 100), Ethiopic so weak that it approximates to the African (*ibid.* 120), and Amharic still weaker (*ibid.* 141).

Latin seems to have stronger pressure of breath from the chest than Greek (*ibid.* VI. 80), and Irish than British (*ibid.* 92, 107). Lithuanian and Slavonic have weak pressure (*ibid.* 175, 176, 203), apparently also Finnish (*ibid.* IV. 147), and certainly Samoiedic (*ibid.* 66).

Now, the contrast between the African and the North American in

respect of this characteristic of utterance supports most strongly the principle of Book I., chap. iii., 16. For as the African races utter with less pressure of breath from the chest than any others, so they have also the least strength of purpose. While the native races of North America are surpassed by none in this quality, the New Zealander has more of it than the native of the Sandwich Islands or Tahiti. The Tamil is the most persevering race of Hindoos (Gram. Sk., III. 91). The Arab has great strength of purpose, as he has great need for it in traversing the desert. But the Hebrew had less need for it on the edge of the desert, the Syrian more scope than the Hebrew for persistent enterprise, as dwelling in a less secluded country. The Latin shows in history more persistence than the Greek. And the Irish have given more proof of it than the Welsh, in the persistence with which they have clung to their religion as well as to their nationality, and the strength of purpose with which they are recovering their position in their native land.

But one of the most remarkable phonetic facts in language is the development of pressure of breath from the chest which has taken place in the Teutonic languages, and produced the two successive changes in the mutes which are stated in Grimm's law (*ibid.* VI. 132). And there is no doubt that as all the Teutonic races have developed the first access of pressure from the chest in their utterance, so, in accordance with the principle of Book I., chap. iii., 16, they are all distinguished for strength of purpose among the nations of the world ; and as the High Germans have developed also the second access of pressure, so they are remarkable above the rest for persistent perseverance.

But if a change of character was the cause of this change of utterance, how can we suppose it to have arisen? Now, if national character consist of the qualities which, under the circumstances of the nation, have given advantage in the struggle for life, any change in those circumstances which would alter the conditions of that struggle would tend to alter the character which would prevail. Such a change took place when the Roman Empire was consolidated in Europe, and the German tribes became aware of that great field for plunder, and of that mighty foe. A new value then became attached to persistent resolution in carrying an enterprise through. And how this influence moved Germany throughout may be seen in the great combination of the German nations which terrified the Romans in the reign of Marcus Antoninus, and which comprehended all nations of Germany, and some of Sarmatia, from the mouth of the Rhine to that of the Danube.<sup>1</sup> This was towards the end of the period during which the first change of Teutonic utterance was accomplished, namely, the first two centuries of our era (Gram. Sk., VI. 132). For the change began as soon as the empire was established, and would tend to spread as a condition of success in the internal struggles of the German nations.

That the moving cause was the stimulus given to martial enterprise

<sup>1</sup> Gibbon, *Decline and Fall*, chap. ix.

by the Roman Empire is confirmed by the fact that it was only amongst the High Germans, the nations nearest to the Roman provinces, that the second change took place about the seventh century. And this change did not spread, because the Roman Empire attracted High German enterprise away from internal wars in Germany.

2. The Tosa and Zulu language is distinguished by a softness of utterance due to a relaxed action of the organs of the mouth (Gram. Sk., I. 8). And it is very remarkable that the kindred language of the Bichuana is hard in its utterance compared with that of the Tosa and Zulu (*ibid.* 14). Now these latter are a much stronger, braver people than the Bichuana, whom Livingstone calls effeminate compared with them.<sup>1</sup> He says that the country of the Kafirs or Zulus is well wooded, and its seaboard gorges clad with gigantic timber. "It is also comparatively well watered with streams and flowing rivers. The annual supply of rain is considerable, and the inhabitants are tall, muscular, and well made. They are shrewd, energetic, and brave. Altogether they merit the character given them by military authority of being magnificent savages." The country of the Bichuana "consists for the most part of extensive, slightly undulating plains. There are no lofty mountains, but few springs, and still fewer flowing streams. Rain is far from abundant, and droughts may be expected every few years. Without artificial irrigation no European grain can be raised, and the inhabitants, though evidently of the same stock originally with those already mentioned, and closely resembling them in being an agricultural as well as a pastoral people, are a comparatively timid race and inferior to the Kafirs in physical development."<sup>2</sup>

It is natural that the stronger people should secure for themselves the better territory and should flourish there. But it is a striking fact that the brave and manly race have the soft utterance, the timid and effeminate race the hard utterance. The paradox, however, disappears when it is remembered that the latter have the harder life, are forced by their conditions to be more laborious, and naturally carry into their utterance the muscular tension to which they are habituated, according to the principles of Book I., chap. iii., 16.

A precisely similar difference of utterance distinguishes the language of the Cree south of Hudson's Bay from the same language as spoken by the Chippeway in their better country about the head waters of the Mississippi (Gram. Sk., II. 17), and also the language of the Yakut from that of the Turk (*ibid.* IV. 18). The insular Caribs have a softer utterance than the continental (*ibid.* II. 100). The Eskimo has a hard utterance (*ibid.* 11). The Dakota and Choctaw in the fertile plains adjoining the Missouri and Mississippi have rather a soft utterance, or at least not hard (*ibid.* 44, 52). The Yakama, on the Columbia river east of the Cascade Mountains, have apparently a hard utterance; and the Selish, more to the north and higher up the Rocky Mountains, a harder (*ibid.* 57, 60). Chiapaneca in Central America has a soft utterance (*ibid.* 89), which cannot be

<sup>1</sup> Livingstone, *Missionary Travels*, p. 32.

<sup>2</sup> *Ibid.* p. 95.

said of the neighbouring languages of Mexico, Guatemala, or Yucatan (ibid. 91, 95). And it is remarkable that Chiapa is lower and less mountainous than these countries. Quichua, spoken in the mountains by the laborious Peruvians, is hard; Guarani, spoken in the fertile parts of the basins of the Amazon and Paraguay, is soft (ibid. 109, 116). The Chikitos live an easy life and have a soft utterance (ibid. 129). The other American languages studied in this work are not characterised as either hard or soft, for want of decisive information.

In the fertile plains of Southern India the Dravidian utterance is remarkable for its softness (ibid. III. 92); the Egyptian not so (ibid. 108), probably on account of Egyptian agriculture involving more labour than a partly pastoral life. But the Galla utterance is very soft, which corresponds with the conditions of the life of the race. For "they occupy vast and noble plains which are verdant almost all the year round and afford nourishment to immense herds of cattle" (ibid. 160, 161).

Buriat has softer utterance than Mongolian, as it belongs to a lower and less rigorous region around Lake Baikal, in which life is easier than in high Mongolia (ibid. IV. 46).

The northern languages of Asia and Europe have a soft utterance, the Samoiede (ibid. 66), the Ostiak (ibid. 100), the Tscheremissian and Laponic (ibid. 125), and the Finnish (ibid. 147). There is in these regions little scope for useful labour; and where life can be sustained, it is sustained by cattle, fish, or game, with little labour.

Syriac utterance and Arabic were harder than Hebrew (ibid. V. 75, 100), as life was more laborious in the less fertile countries.

Greek utterance was harder than Sanskrit or Latin (ibid. VI. 60, 80), as the more rugged soil on which the Greek character was formed required harder labour than India or Italy.

Irish utterance was harder than British (ibid. 92, 107), as the wetter climate of Ireland made the conditions of life less favourable than those in England (see also chap. iv., 21). And High German was harder than the other Teutonic languages (Gram. Sk., VI. 139), as the highlands to which it belonged demanded more labour than the German lowland.

And so far as the various languages are decisively marked with a hard or a soft character, the co-existence of this character with a more or a less laborious life may be traced throughout them all, in accordance with the principle of Book I., chap. iii., 15.

But in action there is another factor besides intensity, namely, continuity. And in respect of this there are differences among the races of mankind which are quite independent of the former. For a race may be active and like to be always engaged in action, though it be not laborious. It may be indolent though occasionally disposed for great exertion.

When activity is combined with a laborious habit, then, according to Book I., chap. iii., 16, utterance will be not only tense or hard, but also full throughout. But indolence leads to an imperfect utterance.



The nomad races of Asia have an indolent utterance of this kind in those vowels which are called soft on account of their imperfect indecisive pronunciation (Gram. Sk., IV. 2). And the partial development of this feature corresponds to the life of those races.

The nomadic life in summer admits great interruptions to its inactivity when pastures have to be changed, and provision has to be made for the winter. But in the winter the inactivity must be continuous. These two parts of the nomad's life, when the difference between them is very great, seem to be distinct sources of ideas having respectively active and inactive associations, and expressed accordingly with a full or an imperfect utterance. For the division of words into those with hard or fully uttered vowels, and those with soft or imperfectly uttered vowels, is confined in its origin to that part of the world where the difference between summer and winter is extreme, where the July temperature is above 59°, and the January temperature is below 23° (ibid. 4, 67).

The Hottentot utterance seems to be marked with indolence (ibid. I. 74); and indolence is one of the most striking characteristics of the race.

An indolence of utterance appears in Hebrew compared with Arabic (ibid. V. 75); and the former was a less active race than the latter.

Irish utterance was indolent compared with British (ibid. 92, 107), which also corresponds to the respective characters of the races.

Lithuanian and Slavonic are characterised by an indolence of utterance which naturally belongs to those whose life was nomadic (ibid. 175, 204).

And in general, where indolence or activity characterises the utterance, in the same degree it is found in the life of the race, according to the principle of Book I., chap. iii., 16.

3. A further difference among races arises from the degree in which they have developed promptitude of volition for a new action. For it may be a necessary aptitude for the life of a race, that they should have slow volition for a new action, so as to be tenacious of an action once begun, or, on the contrary, versatility may be an advantage. And according to Book I., chap. iii., 16, tenacity should show itself in speech by want of facility in the transitions of utterance, leading to many restrictions on the immediate sequence of letters, versatility by unrestricted concurrence of different elements.

Now the former feature is to be observed in the nomad languages of Asia, in correspondence with the continuous sameness of their occupations; but less in Mongolian than in the Tartar languages (Gram. Sk., IV. 2, 35), just as the more scattered pastures of Mongolia (this chap., III. 4) brought more change into the life of the Mongol; and less in Turkish than in Yakut (ibid. 18), by reason of the larger sphere of various activity which the Turks have enjoyed.

A certain want of versatility seems to be observable also in the phoenesis of Nubian (ibid. III. 126) and Kanuri (ibid. 172). As to the character of these races information is wanting.

Greek utterance was more versatile than Latin, and Latin than Sanskrit (*ibid.* VI. 2, 60, 80); which corresponds to the characters of the three races.

Lithuanian and Slavonic are marked with want of versatility (*ibid.* 178, 204) agreeably to the monotony of the nomadic life. So that the principles of Book I., chap. iii., 16, hold through the languages.

4. Polynesian is remarkable above all the other languages for a predominance of the vowels over the consonants (*Gram. Sk.*, III. 2); and the conditions of life of the race are equally remarkable for the degree in which they favour sociality and dispense with care, so that the tendency is rather to expression than to thought.

The Melanesians being weaker and more timid, have more care; and their languages are more consonantal (*ibid.* 20).

The conditions of life of the Malays are not so easy. They belong to the group of races referred to in Section XI. of this chapter (18; and in the Introduction 2) who find what they want supplied to them by nature, but have to look for it with care; and there is no such predominance of the vowel over the consonant in their language as there is in Polynesian (*Gram. Sk.*, III. 71).

It is very instructive to observe that the languages of the most northern nations, whose life is passed under the most rigorous conditions, are also marked with a highly vocalic character, the Eskimo (*ibid.* II. 11), the Samoiede (*ibid.* IV. 68), the Sirianian (*ibid.* 137), the Tschheremissian, the Lapponic (*ibid.* 125, 156), the Finnish (*ibid.* 147). And the same feature, in a somewhat less degree, may be observed in the nomadic languages, but more in Yakut (*ibid.* 2) than in Mongolian (*ibid.* 35, 46) or Tungusian (*ibid.* 51).

Now, though all the conditions of life for these races are so different from those of the Polynesian, in one respect they agree with the latter. For as the Polynesian has no need for thought, these have little scope for thought, and less scope the further north they live. So that both are naturally little characterised by thoughtful habits. The inhospitable region of the northern races renders necessary on their part ingenuity in acquiring the necessaries of life, and in the extreme north, the utmost skill in practising such arts as they have. But it limits the range of their interests, and furnishes little for them to think of. At the same time, the long darkness of the northern winters invites indoor occupations and promotes sociality. So that in their languages as well as in the Polynesian, we should expect to find the vowel predominant over the consonant, according to the principle of Book I., chap. iii., 16.

The Africans are generally talkative and unthinking; and their languages generally have large use and development of the vowel. Kafir (*Gram. Sk.*, I. 8) and Yoruba (*ibid.* 24) have a marked vocalic character. Woloff has eight vowels distinguished by the grammarian (*ibid.* 25), Vei eight vowels (*ibid.* 35), Oti nine vowels (*ibid.* 57), Barea eight vowels (*ibid.* III. 136), Dinka eight (*ibid.* 143), Bari seven (*ibid.* 151); and Galla and Kanuri have each a decided vocalic tendency (*ibid.* 161, 172).

Amongst the American languages other than Eskimo, which has been mentioned above, Choctaw has rather a vocalic than a consonantal character (*ibid.* II. 52); Selish is predominantly consonantal (*ibid.* 60); Otomi has nine vowels, besides nasalisations of some of them, and eighteen consonants (*ibid.* 78); Chiapaneca seems to have a vocalic character (*ibid.* 89), and also Caraih (*ibid.* 100); Kiriri has twenty-one consonants and ten vowels distinguished by the grammarian, but no diphthongs (*ibid.* 121); Chikito has sixteen consonants, six vowels, no concurrence of consonants, and few concurrences of vowels (*ibid.* 129). The other American languages seem to have no marked character in this respect. With regard to the habits of these races information is so deficient that nothing more can be said than that there is no inconsistency between the above facts and the principle of Book I., chap. iii., 16.

Chinese and Siamese have a vocalic character (*ibid.* V. 2, 15), which accords with the social convivial character of the people. Gutzlaff says that the Chinese "are in general a cheerful people, and never more so than at their meals, when all is joviality, and care is drowned in present enjoyment. They then talk incessantly, and endeavour to exhilarate their companions."<sup>1</sup> Burmese and Japanese are less vocalic (*ibid.* 20, 40); Tibetan has a marked consonantal character (*ibid.* 31).

Arabic is remarkable for the balanced use of the consonant and the vowel, corresponding to the habits of the Arab, both thoughtful and social, characterised by "grave cheerfulness and mirthful composure."<sup>2</sup> And the proportion between the two elements is much the same in the other Syro-Arabian languages (*ibid.* 75, 100, 119).

Greek is more vocalic than Latin, and Latin than Sanskrit (*ibid.* VI. 60, 80), and the talkativeness of the races varies in similar proportion. The most talkative of the Indo-European races and the least burdened with care are the Celts, and in Celtic the vowel is more predominant than in any other of the Indo-European languages (*ibid.* 92).

The native character of Teutonic in respect of the proportion of the vowel utterance to the consonant utterance was similar to that of Sanskrit (*ibid.* 133); both vowel and consonant being less developed. And to this corresponds the comparative taciturnity of the Teuton.

Old High German had a fuller vocalisation than Gothic (*ibid.* 137, 147).

Lithuanian is vocalic, probably owing to Finnish influence (*ibid.* 175). But Slavonic shows a striking curtailment of vowel utterance (*ibid.* 202).

Bask is vocalic (*ibid.* Bask, 2).

And throughout the languages studied in this work the phonetic characteristics of the language correspond to the habits of the race so far as the information of the writer reaches, according to the principle of Book I., chap. iii., 16.

<sup>1</sup> Gutzlaff's China, vol. i. p. 486.

<sup>2</sup> Palgrave's Arabia, vol. i. p. 68.

## CHAPTER IV.

*Decay of inflections and formative elements, tendency to detached singleness of stem, and detached elements of definition and connection, phonetic decay. Migrations, mixtures, progress in knowledge, arts, and civilisation.*

1. THE reduction of the inflections both in fulness and in number in Greek and Latin compared with Sanskrit is a striking feature in those languages. The diminished fulness of the utterance of the inflections cannot be attributed to foreign influence; for such fine elements of expression are just those parts of a language which are liable to be ignored by foreign speakers. The change must be due to some influence affecting the native speakers of those languages; and that influence must have been one from which the speakers of Sanskrit were free. Now the Greeks and Latins migrated to distant lands, while the speakers of Sanskrit remained nearer to their native seats. And such migration must have very greatly enlarged the stock of ideas of the former, and increased the range of applications of their words. The words would thus acquire greater generality of idea; for they would be thought as applicable to a larger variety of objects of thought, and the meaning connected with them would become one which was common to a greater number of different applications. As the words thus became more general in meaning, and thought was in some degree drawn away from the present object to the more general associations which it awakened, the connections with the present fact, and other specialities belonging to the present object, would be more weakly thought. And according as the fulness diminished with which these elements were thought the fulness of expression with which they were uttered would diminish likewise; for the lighter thought naturally suggests the lighter utterance.

As the inflections thus tended to be thought more abstractly, they would need to be supplemented in particular instances, in which the connection or modification was not adequately expressed by the abstract inflection. The supplementary expression, as it represented a second thought of what the inflection denoted, would tend to be detached as an independent member of the sentence, and might weaken or destroy the use of the inflection. In this fashion the stronger elements, for which originally there were inflections, would tend to be expressed. For as the inflections which originally expressed them became finer and more abstract in meaning, they would fail to give the due expres-

sion. Their reduced meaning might coincide with what used to be expressed by other inflections and what these were still sometimes used for. By these, then, with the proper supplements when necessary, they would tend to be expressed, and to fall out of use themselves. And thus the great tendency to refine and to drop inflections, and to supplement or replace them by separate elements, is to be accounted for in its earliest appearance by the growing generality of the stems, according to the principle of Book I., chap. iv., 6.

2. This tendency to increased generality in the elements of speech was carried further by the advance of knowledge, arts, and civilisation, according to Book I., chap. iv., 8. And as it increased the need for particularisation, it developed in Greek the great use of the article, and of particles which signalise the sentence, that distinguish the Greek language from the Latin, and indicate the more general interests of Greek thought (chap. iii., Sect. XI., 21).

3. A great literature which is taken by the educated classes as giving a standard of correct language powerfully resists the tendencies to change; because a mode of expression unknown to literature is regarded as uncouth and barbarous. Such changes, however, are apt gradually to come even when the language has been little exposed to disturbing influences; for tendencies cannot but make themselves felt in time. But they affect the spoken language more readily than the written, as there is ordinarily less care for correctness in speaking than in writing. So the modern Greek differs from the ancient language more as it is spoken than as it is written.

4. It is not only the inflections which tend to decay as the meanings of the stems become more general; but also the formative elements added to the root to form the stem of the primitive noun or verb. For according to Book I., chap. iv., 6, the tendency is for the common essence of the various applications of the stem to take the place of the thought of the radical element, so that this becomes fainter, and the formative element of the stem which is relative to the root must become fainter along with it. The elements, however, which continue to be used to form derivatives from other words will of course retain the strength of meaning necessary for that purpose.

In consequence of the weakening of the stem formatives, the variety of forms of the same inflection which was due originally to the variety of those elements added to the root to form the stem, lose the reason of their being. And as the distinctions of the stem formatives tend to disappear, the distinctions of inflections which have the same meaning with different forms will tend to disappear, and the most usual forms to take the place of the others.

In the same way, when it happens that inflections which had originally different meanings lose by the weakening of their significance their distinctions of meaning, they will tend to lose their difference of form, and those which are most in use will tend to prevail over the rest.

5. These various changes are promoted by the influence of foreign speakers failing to note the finer elements of expression, and replacing

them when necessary by coarser methods, according to Book I, chap. iv., 4.

6. The process above described explains the various changes which have taken place in the structure of Greek, and which distinguish the modern from the ancient language.

Thus the dative inflection having a stronger meaning than any other case endings, has disappeared from the spoken language.<sup>1</sup> For in accordance with what has been said above, its due meaning could not be maintained as an element in the thought which the word expressed when thought was drawn away to the more general associations of the stem. And being thought only in part of its significance, it came to coincide in meaning with the more abstract genitive inflection, which then naturally took its place. Or it was supplemented by the preposition *εἰς*, which then reduced it to the still more abstract accusative.<sup>2</sup>

The dual inflections also had too strong a meaning to be maintained. And they declined in significance so as to coincide with the plural inflections, and to be replaced by them.

There was a general tendency to uniformity according as the original causes of the differences of forms passed out of the consciousness of the race.

Feminine nouns ending in *α* make the genitive singular in *-ας*;<sup>3</sup> in the spoken language; because the dative having disappeared every other case had *α* except the genitive plural, which having always had *-ων* in all nouns, retained it in all.<sup>4</sup>

The inflection of the accusative singular being the most abstract of all the case endings, could not bear much reduction, and almost vanished out of thought and expression in the spoken language. Its final *ν* in the first and second declension came to be very faintly uttered, and the accusative singular of the third declension lost the sense of being the accusative, and came to be thought as the stem, adding *-ς* for the nominative when it was masculine, so that *ἄρχιον* was replaced by *ἄρχοντας*, but *πατρίς* by *πατρίδα*.<sup>5</sup> The genitive singular of masculines of the first declension, instead of taking *-ον*, tended to take the final vowel of the stem under the assimilating influence of the other cases.

The final *ς* of the plural tended to be universalised from the third declension so far as to be added in the first, so that the nominative plural came to end in *-αις*, but when the final vowel of the stem is very strong, or belongs to a foreign word to be preserved with distinctness, the ending is more distinct, and *δ* is taken to prevent hiatus, so that the ending is *-δαις*. The accusative plural is the same as the nominative, for there is no sense of difference between them.<sup>6</sup>

The masculine nouns of the second declension maintain their ancient forms, except that they drop *ν* in the accusative singular. This shows a superior strength in their inflections (Gram. Sk., VI. 8).

<sup>1</sup> Vlachos, *Modern Greek Grammar*, pp. 8, 9.

<sup>2</sup> *Ibid.* p. 83.

<sup>3</sup> *Ibid.* p. 10.

<sup>4</sup> *Ibid.* p. 9.

<sup>5</sup> *Ibid.* pp. 12, 17.

<sup>6</sup> *Ibid.* pp. 10, 12, 18.

The declension of neuters in *-ιμων*, as if they were neuters in *-ιμα*, arose from the assimilating influence of those in *-μα*, *-ματα*; but *-ιμων* is preserved in the nominative accusative and vocative singular.<sup>1</sup>

7. The article remained as it was, for it had no stem to be changed into a general essence and weaken the inflection. But the noun having no dative, the article could not have one.<sup>2</sup>

The stems of the first and second personal pronouns tended to become uniformly *ἐμ-* and *ἐσ-* in singular and plural, except that the nominative singular was *ἐγώ* and *σύ* or *ἐσύ*, the other differences having lost all significance.

The accusative singular took *-να*, probably from *τινα*. For the generalising and detachment of the stem produced in the first and second persons an increased sense of personality, and this rendered necessary a stronger element to express them as objects. But it weakened the distinctive sense of the case relations (1), and consequently the genitive and dative, both singular and plural, tended to be expressed by the accusative.<sup>3</sup>

8. In the verb the third plural present has *-ουν* or *-ουσι* instead of *-ουσι*; because every other tense, that is, the imperfect and the aorist, having *ν*, it prevailed over *σ*. The imperfect is apt to take *α* from the first aorist, except in the second and third singular; for in these persons they both have *-εσι*, *-ε*, probably on account of *-εσ* being the stem of the second personal pronoun. For the same reason the second singular passive has *-εσαι* present, *-εσο* imperfect, following the analogy of *-εσαι*, *-εσο*. The future is expressed by *θα* before the present or aorist subjunctive, *θα* being from *θέλω* *ἵνα*, or by *θήλω*, followed by present or aorist infinitive; the perfect by *ἔχω*, pluperfect by *ἔχον*, followed by aorist infinitive. In these compound tenses the present infinitive active drops *-ν*, and the aorist infinitive active is assimilated by changing *-αι* to *-ει*; in the passive it is shortened by dropping *-ναι*. Conditional tenses may be expressed by *θὰ*, followed by imperfect or pluperfect. The third person imperative singular and plural is expressed by *ἄς* = *ἄς* before the subjunctive. The auxiliaries were rendered necessary, according to the principles above stated, by the weakened inflection not being sufficient to express the tense or mood. The first aorist passive has a strange form, sometimes *ἐλύθηκα* for *ἐλύεην*.<sup>4</sup>

9. The definite article is always used before the Christian name, and the names of cities and countries.<sup>5</sup> With the former it particularises amongst those of the same name. With the latter it probably defines or distinguishes from what is outside the limits.

The growing generality of words, as it promoted the use of the article in ancient Greek (2), extended the use of it in modern Greek. It also threw more stress on the relative pronoun; because the sense of the present connections of the noun which the relative had to express, was weakened in the idea of the noun (1). And in forming those connections, the relative tended to grasp the noun more strongly, so as to get a sense of its nature and be expressed by *ὁποῖος*;

<sup>1</sup> Vlachos, p. 13.

<sup>2</sup> Ibid. p. 8.

<sup>3</sup> Ibid. pp. 35, 36.

<sup>4</sup> Ibid. p. 46-51.

<sup>5</sup> Ibid. pp. 40, 80.

instead of by  $\vartheta\varsigma$ .<sup>1</sup> The numeral  $\varepsilon\tilde{\iota}\varsigma$  ( $\varepsilon\tilde{\iota}\alpha\varsigma$ ) and  $\tau\iota\varsigma$  are used for an indefinite article.<sup>1</sup>

10. In the Romance languages the growing generality of words rendered necessary the development of a definite and of an indefinite article, unknown to Latin, to express respectively the definite and the indefinite individual, as distinguished from the general idea which the noun expressed. In Wallachian the definite article was suffixed to the noun;<sup>2</sup> which seems to indicate that in itself the noun was thought in Wallachian less generally than in the other languages (compare Syriac, Gram. Sk., V. 112).

11. In the decay of the formative elements of the stem of the noun, according to what has been said above (4), the fourth and fifth Latin declensions fell away in Romance, the fourth into the second, the fifth into the first or third. And some nouns passed from one of the first three declensions to another.<sup>3</sup>

In the confusion of the stem formatives, the more usual tended not only to take the place of the less usual, but also to bring with them the gender which usually belonged to them. Thus feminines of the fourth declension often became masculines of the second.

Masculines of the first also tended to become feminine; for this was the most usual gender of nouns in *-a*. Sometimes the common essence of its applications which, according to Book I., chap iv., 6, the noun came to express, suggested a different gender from that which belonged to the old idea;<sup>4</sup> as when *potestas* became masculine from being used to denote a man.

12. The Romance languages gave up the distinction of a neuter gender in the substantive.<sup>5</sup> For the life of these nations had become easier and more passive than it once was, so that they dominated nature less than of old (chap. iii., Sect. XIII. 2).

13. In the decay of the inflections in the Romance languages the other oblique case endings tended to become as abstract as the old accusative, and to be replaced by prepositions with an accusative. And the accusative thus becoming the most usual case tended to take the place of the nominative, according as the distinctive sense of the two cases grew weaker in the consciousness. The Provençal, however, very generally retained the nominative along with the accusative; and Old French also sometimes did so. And the Italian and Wallachian, though retaining only one case, sometimes kept the nominative instead of the accusative.<sup>6</sup> Perhaps these failures of the accusative to overcome the nominative were due to its having had a longer struggle with the other cases, so as not to gain the same predominance in the language.

The Italian ablative preposition *da*, contracted from *de ad*, is interesting.<sup>7</sup> *Ad* gives motion to *de*, so as to distinguish of and from by the motion in the latter (Gram. Sk., VI. 8).

<sup>1</sup> Vlachos, pp. 40, 80.

<sup>2</sup> Diez, Gram. der Romanischen Sprachen, vol. ii. pp. 15, 16.

<sup>3</sup> Ibid. p. 16.

<sup>4</sup> Ibid. ii. pp. 24, 25.

<sup>5</sup> Ibid. p. 4.

<sup>6</sup> Ibid. p. 5-9.

<sup>7</sup> Ibid. p. 27.



14. It is remarkable that in the pronouns a nominative for the most part maintained itself, and that the oblique case which prevailed was not the accusative, but, according to Diez's view of *-ui*, the dative in the singular, and the genitive in the plural. In Spanish and Portuguese, however, the accusative prevailed over all the cases both in the singular and in the plural. In Provençal the accusative was used in all the oblique cases, as well as the dative in the singular and the genitive in the plural. In French the accusative prevailed over all the cases in the plural.<sup>1</sup>

The pronouns always had a stronger sense of the inflections than the nouns, because the fineness of the thought of the stem left more room for that of the inflection in the idea. And therefore they generally maintained the sense of the subject so as to distinguish the nominative.

Perhaps the sense of attention directed to, which is in the nature of a pronoun (Def. 7), imparted to every relation of which a pronoun was object a dative element, which in the decay of the inflections was maintained by the nature of the pronoun (Gram. Sk., IV. 10); and this, when directed to a plural pronoun, was thought not as comprehending the plurality in its aim, but as affecting the parts of the plurality which were included in the plurality as in a genitive.

The Wallachian genitive of a defined noun both in singular and plural, taking for its preposition *a* (= *ad*), whereas that of an undefined noun takes the usual preposition *de*,<sup>2</sup> shows that pronominal demonstration favours the dative element, making the genitive relation to be thought as attached to, or belonging to.

The Spanish article, when used with an adjective for an abstract noun, and the Spanish demonstrative and the Portuguese demonstrative, retained a form for the neuter. The latter in the remote demonstrative *esse* changed the stem, the neuter being *isso*.<sup>3</sup>

The Spanish, and still more the Portuguese, were comparatively secluded from the influence of foreign invasion; and perhaps to this is due this fuller retention of gender. Diez remarks that Portuguese preserved the ancient forms better than Spanish, which was more exposed to Bask influence.<sup>4</sup> But they both and Provençal preserved them better than the other languages.

15. Of the active verb, the Romance languages retain the present, imperfect, and perfect, indicative in the written languages. In some spoken dialects the perfect has been impaired, and retains only some of the personal forms. In others it has quite disappeared and is replaced by *habeo* with the past participle, or by *facio* with the infinitive, like English did love.

The pluperfect appears in Italian only in *fora* (*fuera*). But it is preserved complete in Provençal, Spanish, and Portuguese. It is also to be found in the oldest French.

The future indicative has disappeared, leaving only *fia* (*fiam*) in Italian, and *er* (*ero*) in Provençal and French.

<sup>1</sup> Diez, ii. p. 81-83.

<sup>2</sup> Ibid. p. 54.

<sup>3</sup> Ibid. pp. 32, 92, 93, 97.

<sup>4</sup> Ibid. i. p. 98.

The present and pluperfect subjunctive are retained in all the languages, while the imperfect and perfect have disappeared. Spanish and Portuguese alone retained the future subjunctive.

The imperative second person singular remains in all the languages also the infinitive present, and the gerund in *-do*. The second plural imperative is only in Provençal, Spanish, and Portuguese. In Wallachian only is there a trace of the supine. The present participle remains, but almost always as an adjective, its place as participle being taken by the gerund; the future participle is found in a few instances as a Latinism.

The inflections of the pluperfect indicative, and the imperfect, perfect, and future, subjunctive, having by phonetic decay almost entirely lost their distinctions of form, disappeared, according to the principle of Book I, chap. iv., 9, from those languages which were more exposed to the effects of foreign invasion; the pluperfect subjunctive, or in Provençal, Spanish, and Portuguese, the pluperfect indicative, being sometimes used for the imperfect subjunctive. But generally they came to be expressed with an auxiliary.

The inflection of the future indicative, when weakened by the growing generality of the stem (1), was not sufficient to express the strong thought of the future, and it was replaced by an auxiliary *habeo*, preceded by the infinitive. This auxiliary, when used with the past participle to express a past tense, went first, because it was the subjective part of the expression, and the subject was clear of the past action. But when used in the present tense with the infinitive to express a future, or in the past tense with the infinitive to express a past future or conditional, it followed the infinitive because the subject was thought as engaged with anticipation of the action, and was therefore expressed as determined by it (Def. 23). And so fully was the subject thought as engaged with the anticipation that the auxiliary coalesced with the infinitive into one word.<sup>1</sup>

16. It is remarkable that in the present tense the accent of the Romance verb tended to move forward from the antepenult to the penult, as if the word had come to express a less simple idea (Def. 27), and the person had come to be felt as a more distinct element so as to attract the accent. Now this would follow from the growing detachment of the stem as it tended to be thought in the common essence of its applications, according to Book I, chap. iv., 6. But in the other moods and tenses the stem was kept more particular by taking up the elements of mood and tense in their reduced condition. And the union between the stem and these elements being closer than it was of old by reason of their reduction, gave more weight to the stem and increased its attraction for the accent, so that its movement forward was checked or reversed.<sup>2</sup> The root of the verb, however, by tending to be thought in the common essence of all its applications, was liable to lose its verbal nature (22), and then the subjoined verbal elements were stronger, and had more attraction for the accent.<sup>3</sup>

<sup>1</sup> Diez, ii. p. 117-123.

<sup>2</sup> Ibid. pp. 126, 127.

<sup>3</sup> Ibid. pp. 131, 136.

The passive inflection came to be too weak to express the passive, and was replaced by various auxiliaries.<sup>1</sup>

17. The lightness of pronominal elements which is so characteristic of Celtic (Gram. Sk., VI. 114, 115, 131) may be traced also in the Romance languages.

It was probably the strong subjectivity of the verb which in French weakened the negative element preceding it, and rendered necessary a supplementary negative after it; for the former negative separated the verb from the subject.

The substantive in the Romance languages precedes the adjective oftener than it follows; but when the attribute affects the main part of the elements of the idea of the substantive the adjective may precede.<sup>2</sup>

18. The Romance phœnesis is soft and vocalic, the tenuis being liable to become a medial, and the medial a vowel, and the surd breath of aspiration to be given up,<sup>3</sup> and both these characters are stronger in Italian than in the other languages. This seems to be due to the ease and social pleasure which resulted from the civilisation and affluence of these parts of the Roman empire (preceding chapter, XV.)

It is remarkable that the southern dialects of Italian are more vocalic and softer than the northern, whether this be due to climate or to a greater mixture in the north with northern races. In consequence of their soft utterance the Romance languages do not tolerate hiatus;<sup>4</sup> it requires too strong and definite a muscular action in changing the position of the organs (ibid. III. 92).

19. In Modern Greek, on the other hand, there is a curtailment of vowel utterance compared with the ancient language, as if there was a diminution of social vivacity in the race. Thus  $\eta$ ,  $\upsilon$ ,  $\varepsilon$ , and  $\omega$  are all sounded  $i$ ,  $\alpha i = e$ ,  $\upsilon u = u$ ;  $\alpha \upsilon = av$ , and  $\varepsilon \upsilon = ev$ , before vowels, medials, and liquids, otherwise  $af$  and  $ef$ ;  $\eta \upsilon = ef$ ,  $\omega \upsilon = off$ .

There is little relaxation of consonant utterance;  $\beta$  and  $\delta$  are aspirated, and  $\gamma$  before the close vowels  $\varepsilon$ ,  $i$ , and  $\upsilon$ , becomes  $y$ .<sup>5</sup> "All consonants are pronounced by the Greeks with the utmost force and distinctness of which they admit."<sup>6</sup>

20. The great change of thought which was promoted by advance in knowledge, arts, and civilisation, gave increasing singleness to the idea expressed by the primitive word in Romance (Book I., chap. iv., 8). Derivative words felt as such, because formed with derivative suffixes still in use to form derivatives, have not this singleness. On the contrary, the primitive has acquired such distinct singleness that it is in a certain degree detached from the derivative suffix, so that this must be syllabic, and is generally accented.<sup>7</sup> But the growing singleness of old words produced some interesting effects in the Romance languages.

The accent (Def. 27) is on the point where the sense of the whole

<sup>1</sup> Diez, ii. pp. 127, 128.

<sup>2</sup> Ibid. iii. p. 450-453.

<sup>3</sup> Ibid. i. p. 289-305.

<sup>4</sup> Ibid. pp. 82, 198.

<sup>5</sup> Vlachos, p. 2-4.

<sup>6</sup> Geldart, Mod. Greek, p. 74.

<sup>7</sup> Diez, ii. p. 278.

word is a maximum, and it strikes the vowel with a force of utterance due to the sense of the whole word. According as the common essence takes the place of the radical idea (Book I., chap. iv., 6-8), the whole idea of the word becomes more concentrated at the maximum point, and prompts additional expression where the accent strikes the word. The accented vowel, if it be *i* or *u*, tends to be not only accented but opened, to *e* or *o*, so as to be a fuller utterance; in French it is half opened, so as to become *ei* (changed to *oi*) or *ou*, but *u* becomes *o* before a nasal; if it be *e* or *o*, it gets additional force from being preceded by a compression (Def. 26) which produces the closer vowel *i* or *u*, so that it becomes *ie* or *uo*, *ue* in Spanish; if it be *a* the compression tends to change *a* to *e*, but more frequently in French than in the other languages; *a* remains unchanged before *m* and *n*, into which it passes as a nasalisation.

In position before two consonants these leave less room for addition to the accented vowel; but in Spanish and Wallachian this is not such a bar to the increase as in the others. The long vowels do not admit of increase like the short ones; but in French *ē* is apt to become *ei* changed to *oi*, and *ō* to become *ou* changed to *eu*. Wallachian can subjoin *a* to *e* and *o*, short, long, and in position.<sup>1</sup>

Owing to the vocalic character of Romance utterance a vowel in contact with a consonant affects the utterance of the consonant as in Celtic (Gram. Sk., VI. 93), so that it is apt to be uttered with the volition present to utter the vowel, the vowel which is to follow the consonant making itself felt before it. This is increased by the additional expression accompanying accentuation before the consonant; so that by attraction of *i* from a following syllable *a* is often changed to *ai*, *ei*, *ie*, or *e*.<sup>1</sup>

The absorption of the word into the accented syllable which arose from the growing singleness of the idea was accompanied by an abbreviation after the accented syllable, which is especially remarkable in French and Provençal.<sup>2</sup>

21. In Celtic also, as in Romance (12), the neuter gender was given up, so that in modern Celtic all nouns are either masculine or feminine (Gram. Sk., VI. 109). This agrees with the easy passive character of the Celt, who dominated nature less than the Teuton (preceding chapter, XIII.)

The loss of the cases of the noun in British (Gram. Sk., VI. 113) is doubtless due to foreign influence (Book I., chap. iv., 4), from which Irish was comparatively free. Perhaps the influence of Roman civilisation was in part the cause of the greater softness of British utterance (preceding chapter, XV. 2), according to Book I., chap. iv., 9.

To foreign influence also doubtless is due the auxiliary prefixes of the verb in Celtic (Gram. Sk., VII. 117).

Celtic also developed an article (ibid. 109, 110, 130) in the growing generality of thought (above, 2, 10).

22. The Teutonic weak declension (Gram. Sk., VI. 144) appears

<sup>1</sup> Diez, i. p. 146-172.

<sup>2</sup> Ibid. p. 197.

from the nature of the nouns affected with it to be due to the attraction of thought to the associations of the noun from its present connections; which weakens that part of the substantive idea in which the substantive object is thought as in the connections of the fact (Def. 4), and renders necessary an arthritic element to put it in connection. It was therefore developed by the growing generality of thought and the tendency to substitute a common essence for the radical idea, according to Book I., chap. iv., 6. The weak conjugation in Teutonic (Gram. Sk., VI. 159) is another consequence of the same cause, by virtue of which, as in Romance (above, 15), the radical part in becoming a common essence lost its verbal succession, and this had to be subjoined.

It is probably to the influence of foreign speakers not accustomed to a relative pronoun that the cumbersome expression of the relative in Teutonic is due (Gram. Sk., VI. 156). But it is very remarkable that Teutonic, like modern Greek, and no doubt from the same cause, developed a stronger relative (9), and that as this was *ὁτιος* in Greek, so it was *hrēleiks* (qualis) in Teutonic (Gram. Sk., VI. 154). Probably to the influence of the northern nations, who had only a past and a present tense (preceding chapter, V. 1), the loss of the future is due; for in Gothic and Old High German the Greek and Latin future is rendered by the present (Gram. Sk., VI. 157).

Such an influence would also promote the use of auxiliary verbs (ibid. 162), according to Book I., chap. iv., 4; and the loss of the passive voice (ibid. 167).

The growing generality of thought required an article in all the Teutonic languages; and in Norse, as in Wallachian (above, 10), it was suffixed to the noun (Gram. Sk., VI. 171).

23. The Slavonic, and still more the Lithuanian numerals, as if comparatively little used, remained particular, so as to be less abstracted from the objects numbered (ibid. 183, 212; see preceding chapter, XIII. 4). But also throughout Lithuanian and Slavonic there are fewer marks of growing generality of thought than in the other modern Indo-European languages. The inflections of nouns and verbs are less weakened and reduced in these than in the others; they retain the dual number; and they have only a partially developed article (Gram. Sk., VI. 184, 188, 195, 207, 208, 214–216, 223). There would seem to be a narrower range of ideas, and therefore less growth of general associations with the nominal or verbal stem, tending to weaken in the idea of the word the particularities of the present instance, or to require a particularising element.

24. One of the most interesting illustrations of the principles of Book I., chap. iv., is what has been called the umlaut in the Teutonic languages (ibid. 142, 173). This appeared only in later times, when the inflections were going to decay. It was a partial absorption of a formative element into the accented syllable of the root, and is quite analogous to the strengthening of the accented vowel in Romance (above, 20), owing to the concentration of the idea which the word expressed. The same cause is operative in both

cases; the growing singleness of idea as a common essence took the place of the old radical idea and became more concentrated as the race advanced in knowledge, arts, and civilisation (Book I., chap. iv., 8). The difference of the result in Teutonic from what it was in Romance was due to the more spreading action of Teutonic thought in consequence of which the formative element came to affect the root even through an intervening syllable (Gram. Sk., VI. 142, 173).

And thus the principles of Book I., chap. iv., are found to explain the great changes to be traced in the history of language where the mental power of the race admits, and its migrations and progress have been such as promote, a marked generality of idea; as those of the other chapters of that Book have been found to be general laws governing the structure of language so far as the information available in this work enables them to be tested.

## APPENDIX.

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### *Comparison of the Mental Powers of Man with the Intelligence of Lower Vertebrate Animals.*

LANGUAGE is the prerogative of man, and a study of its principles would hardly be complete at the present day without an effort to see what light it throws on man's essential superiority in thought to all other creatures. For at the present day Darwin's theory of evolution has given a new interest to the comparison of the powers of the human mind with the intelligence which is manifested by the lower animals. The importance, however, of such a study is quite irrespective of that theory, and it may be carried on without any reference to the question of the origin of species. For whatever view may be taken of that question, the fact is patent that comparative anatomy and comparative physiology set before us a great course of development in structure and function from the lowest animal to the highest, whether we conceive that this is due to distinct acts of creation or to natural laws of evolution. And it is equally a matter of fact that a thorough scientific knowledge of a structure or a function in any species of animals can be obtained only by the comparative method, which studies them in the light of the great series of animal development.

Now mind as a power in human nature, and the brain as its instrument, form no exception to this rule. For though thought be not regarded as a function of the brain, yet it is the function of the brain to minister to the acts of thought, so that cerebral action is the condition of mental action. Between these two actions there must be an exact correspondence; so that both must be studied if we would understand either. And that study must be carried through the series of animal life, so far as this can be done, in order that it may have a solid basis. When the correspondences of cerebral structure and animal intelligence have been ascertained, we shall have the outlines of a truly scientific psychology legible in the structure of the human brain. This, however, is at present a distant prospect. Before it is realised, the development of intelligence in the lower animals must be known in order to be compared with the development of the brain. And though the latter is well known, of the former scarcely anything is known with the scrutinising analysis which is necessary. For just as in the study of the human mind, the great effort is to distinguish the essential powers of the mind from the mere

association of mental states ; so in the study of animal intelligence the great effort must be to distinguish its powers from those congenital associations which are called instinct. Mere observation without such analysis is misleading ; for there is scarcely any action of the rational faculties of man which may not be simulated by animal instinct. And it may be long before this attractive field of investigation has been at all adequately worked. Meanwhile, however, our views of truth must be harmonised with the best knowledge that we have, and provisional anticipations formed of what seems likely to prove true.

Such a provisional anticipation the present writer ventured to offer in a paper published in the *Journal of Anatomy and Physiology* for November 1874. And though it is so meagre and imperfect, he subjoins it entire with some slight corrections and additions as preparatory to the consideration of what it is that makes language peculiar to man.

#### ON THE DEVELOPMENT OF THE POWERS OF THOUGHT IN VERTEBRATE ANIMALS IN CONNECTION WITH THE DEVELOPMENT OF THEIR BRAIN.

Although Mind can never be identified with Matter, nor the acts and states of the mind reduced to acts and states of the brain, yet as the latter are the physical antecedents of the former, the study of the one class of phenomena is calculated to give light and guidance in the study of the other. The object of the present paper is to consider some general outlines of the development of the powers of thought in vertebrate animals in connection with the development of their brain, in the hope that such a general view may throw some light, both on the powers of the mind and on the functions of the brain.

An obvious characteristic of mental action in the lower animals as compared with the higher is, that it is to so large an extent instinctive. Now the nature of such instinctive action as involves thought may be well studied in the case of the beaver, though his mental action is not limited to instincts. The following is an instructive account given by Mr. Broderip of one which he kept in his house. I quote it from Dr. Carpenter's work on "Mental Physiology," p. 92.

"The building instinct showed itself immediately it was let out of its cage and materials were placed in its way ; and this before it had been a week in its new quarters. Its strength even before it was half grown was great. It would drag along a large sweeping-brush or a warming-pan, grasping the handle with its teeth, so that the load came over its shoulder, and advancing in an oblique direction till it arrived at the point where it wished to place it. The long and large materials were always taken first and two of the longest were generally laid crosswise, with one of the ends of each touching the wall, and the other end projecting out into the room. The area formed by the cross-brushes and the wall he would fill up with hand-brushes, rush-baskets, boots, books, sticks, cloths, dried turf, or anything portable. As the work grew high he supported himself on his tail,



which propped him up admirably ; and he would often, after laying on one of his building materials, sit up over against it, appearing to consider his work, or, as the country people say, 'judge it.' This pause was sometimes followed by changing the position of the material 'judged,' and sometimes it was left in its place. After he had piled up his materials in one part of the room (for he generally chose the same place), he proceeded to wall up the space between the feet of a chest of drawers, which stood at a little distance from it, high enough on its legs to make the bottom a roof for him, using for this purpose dried turf and sticks, which he laid very even, and filling up the interstices with bits of coal, hay, cloth, or anything he could pick up. This last place he seemed to appropriate for his dwelling ; the former work seemed to be intended for a dam."

Here we see that though the labours of the beaver in its natural condition seem to be full of purpose and guided by a wonderfully intelligent reference to the end which they are to serve, the animal is really urged to form its constructions by an impulse which is quite irrespective of that end and purpose. Mr. Broderip's beaver can hardly have had any idea of a dam acting as such, connected with its successive acts of construction, and guiding those acts as what they were to realise ; for its surroundings were inconsistent with such an idea. And if its successive acts were not quite independent of such an idea, they would not have been performed under the circumstances. At the same time, however, the labours of the beaver were far from being destitute of thought. On the contrary, it seems to have had a very distinct idea of the particular step of construction in which it was engaged, and to have been careful to make its work conform to that idea. Each constructive act was in continuation of what had been already done, and its regulative idea was suggested by the then state of the work. But the realisation of each such idea was sought in succession as an end, without reference to the ultimate result of the entire series of actions.

In our own mental constitution we are familiar with a process by which means come to be sought for themselves without reference to the end which they subserve ; the desire having been transferred from the end which was originally its object to the means which have been successfully used for the attainment of that end. The money which was first prized only for what it could purchase comes gradually to be desired for itself, and is sometimes preferred to anything that it could buy, the means having become the end, and the original end being comparatively disregarded. And in truth many, if not most of the objects which we seek in mature life, are examples of desire similarly transferred. In such cases the means successfully used to attain the object of our desire become associated in the mind with the pleasure of that attainment, so that a sense of such gratification combines with the thought of those means, and forms part of the idea of them ; and in proportion as this takes place the means attract to themselves the desire, and are sought as an end. When a variety of ends are attained by similar means, as when money is found to purchase all other commodities, then a corresponding variety of desires become combined with the idea of those means, and the compound attractiveness which they thus acquire is different from any of the original desires, and

may supplant them all. But when the same means continue to be used only for the attainment of the same end, it is the gratification of the original desire which is combined with them, and this desire, after having sought the means, goes on to seek the end. The desire which is transferred from an end to the means whereby it is habitually attained, might, when the means have become an end, be transferred again to the habitual means of their attainment. And so a succession of means might come to be sought, each one for its own sake attracting action after the other, and leading to the attainment of the original end. And this process as it grew might be transmitted to offspring as an hereditary tendency, so as to generate an instinct; though there are some instincts which could not have been originated in this way. Now in human nature, according as such series of acts become more and more habitual and easy, they are performed with less and less thought, till at length they may be performed without any thought at all, being guided only by sensation. But when they do engage thought, that thought generally involves intelligent purpose; and the mind thinks not only the present act but what that act will effect. The peculiarity of instinctive action, like that of the beaver, is that it is not an unthinking hereditary habit connected only with sensation, but that each successive act is performed with thought; while, at the same time, thought is confined to the present act, or at most includes very little beyond it. The native impulse or desire seeks each step in succession irrespective of the result of the whole, because thought cannot take in the end of the series.

But this limited scope of thought, which is unable to take in a series of acts, is far from being characteristic of the intelligence of vertebrate animals in general. On the contrary, those which have a more developed brain plainly exhibit in their actions intelligent purpose, a power of thinking the means in connection with the end, so as to have present to their consciousness a sense of a series of acts leading to a desired result. Of this many examples might be given, but it may be sufficient to quote as an illustration of it the following anecdote of a dog from Mr. Watson's book, on the "Reasoning Power in Animals," p. 130.

"Count Tilesius, a Russian traveller, who wrote at the beginning of the present century, relates a most remarkable proceeding of a dog of his, which he himself witnessed. The dog in one of his excursions from home had been worried by an animal of greater strength than himself, and returned crest-fallen. For some time afterwards it was observed that he abstained from eating half of the food given him, but carried away the other half and laid it up as a private store. When he had gone on thus for some days, he one day went out and gathered round him several dogs of the neighbourhood, whom he brought to his home and feasted on his hoard. This singular assemblage attracted the count's attention. He watched their movements, saw them all go out together, and followed them at a distance. They proceeded deliberately onwards through several streets till they came to the outskirts of the town, where, under the guidance of their leader, they all fell upon a large dog, whom they punished with great severity."

Now this series of actions is of such rare or merely occasional

occurrence in the life of a dog, that it cannot be accounted for on the supposition that by that process of association which grows out of frequent repetition, the gratification of attaining the end had mingled with the thought of all the means, and rendered them in themselves attractive in succession. There may, indeed, be in the dog, as a gregarious animal, an inherited tendency to look for help in circumstances which make help needful, and possibly a tendency to court the alliance of other dogs by giving them food, though this is more probably due to his own intelligent sense of their feelings. But the further step of saving his food instead of eating it can hardly be an instinctive impulse awakened by the circumstances but without conscious purpose; for it requires so strong an impulse that the instinct should be one in full action, and therefore of frequent occurrence. The sense of injury would arouse the instinct of revenge. This from inherited or acquired association would be followed by a desire for help. This would suggest the giving of food, and this the storing of food. And each time that food was present the sight of it might awaken these thoughts in succession. But if it was only in succession that the dog could have these thoughts, losing the consciousness of each as he passed to the next, the original desire for vengeance, which would mingle in some degree with the second thought, and perhaps might even tincture the third, would be so faint in the fourth, if it were present at all, that the strong instinct of eating the food would prevail over the mere idea of storing it. That there might be an active desire to store the food sufficiently strong to make the dog abstain from it, there must have been present to his consciousness along with the idea of storing it a thought of giving it to the other dogs, and gaining their help to gratify his revenge. He must have had a power of thinking a particular act as a part of a series, combining with the idea of that act a thought of the series of acts leading to their result.

Now wherein does this differ from the power which the human mind possesses of forming a plan to attain an end? If what has been stated contains the whole of the action of intelligence which was involved in the proceedings of the dog, then those proceedings reveal only a power of thinking, as a whole, a series of acts, each with its effect, and all with their result. But the human mind adds to this the further power of believing, with more or less certainty, that each step in the series of acts which it plans will be followed by the consequence connected with it in thought. Now this implies inference from past experience; and after all that has been written on the process of inference or reasoning properly so called, we must, if we are to distinguish it from mere association of facts, come back to the old theory, that inference is the process of imparting to the idea of a fact the degree of assurance which belongs to it, as a case of a general principle.

Mr. Darwin, in his "Descent of Man," p. 41, mentions a female baboon who adopted young dogs and cats, which she continually carried about; and he tells that an adopted kitten scratched this affectionate baboon, "who," he says, "certainly had a fine intellect,

for she was much astonished at being scratched, and immediately examined the kitten's feet, and without more ado bit off the claws." Now, such an act of intelligence seems to be beyond the powers of a dog. In the "Wonders of Animal Instinct," from the French of Ernest Menault, p. 363, the following acute distinction is drawn between the intelligence of the ourang-outang and that of the dog.

"The ourang-outang, without being instructed by man, does accomplish acts of which the most sagacious and best instructed of our dogs is incapable. If the dog is chained up, and the chain becomes entangled, the animal pulls it forcibly towards him, and often increases the evil, instead of removing it. If the obstacle continues, he becomes frightened and cries out, but never thinks of searching into the cause of the mischance. It is not so with the ourang-outang. The moment a similar accident happens to him, he tries to find out the real state of things. You will not see him pulling against a powerful obstacle with blind force. He stops at once, as a man would do in similar circumstances. He turns round to examine the cause of the occurrence. If the chain be entangled by a heap or weight of any kind, he disengages it. In every case he seeks the why and the wherefore. Is not this seeking for causes a manifest sign of intelligence?"

Now it is much more than a sign of intelligence, it is evidence of the power of thinking a fact with belief as a case of a general principle; and that power is the power of reasoning. The dog whose chain is entangled finds himself unable to perform the action which has become usual to him under the circumstances; and he is merely disturbed by this impediment to the regular play of his associations. The ourang-outang sees in this check to his usual action something more than the fact that he is checked, namely, the presence of a thing not yet known, altering the usual action of the chain. If, indeed, such a thing had been observed before acting in this way sufficiently often to form an association, the dog would think of it as well as the ourang-outang. And if its removal on those occasions had relieved him, the dog too would think of removing it. The supposed case, therefore, is one in which such an association has not been formed. The ourang-outang may never before have been confined by a tangled chain; the baboon may never before have been scratched by a paw. The thought which each occurrence suggests to them is a fine abstraction from a far wider experience, namely, the presence of a new condition when there is a new action. This is a fine element of fact which belongs in common to a number of facts. It might be connected in thought with the present fact by mere association of those other facts in which it was an element. But when thus thought, it would be too faint to attract the attention of the mind and govern action. In order that such an abstract element of past experience should govern action, it is necessary that it should be strengthened with a new element of belief and combined in a sense of reality with the present object. To the ourang-outang in the one case, and to the baboon in the other, the thought of a new circumstance as condition of a new action was no abstract conception, but a special part of the idea of the present fact; and it attracted action, suggesting the way in which the unpleasantness was to be removed. It was thought with a power which the dog

does not possess, the power of combining in an assured sense of reality with the idea of an object some abstract co-existence or succession which has been gathered from similar objects as a uniformity of experience ; the power, in a word, of thinking a case of a general principle with the belief which belongs to it as such.

Now this step of mental development which may be observed in the ourang-outang, as compared with the dog, is similar in its essential nature to the previous step to which it is superadded, and which may be observed in the dog compared with the lower vertebrate animals. The dog can combine with the idea of an act, a thought of a further series of acts leading to a result, so as to think the act with purpose as part of the series. The ourang-outang can combine with the idea of a fact or thing, a thought of other similar facts or things, singling out an element in which they more or less uniformly agree, so as to think the fact or thing with more or less assurance as another instance of the uniformity. Each is a new power of combining thoughts which otherwise would have required a long course of repetition in conjunction with each other, before they could have grown together. And each combines those thoughts in a closer and more vivid union through the medium of a new element, namely, sense of progress towards an end in the one case, and belief in the maintenance of a uniformity in the other.

But can the progress of mental development be traced through the vertebrate series of animals as having advanced by these steps? Can they be classed in reference to their mental powers in three groups, of which the lowest can comprise in one act of thought only what can be perceived by sense all at the same time, the second can comprise in one act of thought a series of successions in time so as to think a single object of sense as part of such a series, and the third can comprise in one act of thought a class of co-existences or successions so as to combine with a particular fact the common element of co-existence or succession belonging to the class?

The operations of birds in the building of their nests are evidently of the same character as those of the beaver in the construction of his dam. They plainly proceed from an instinctive impulse which is independent of conscious purpose, and which acts even where the circumstances are inconsistent with the end to which it leads. They indicate therefore no larger power of mind than that which is limited in each of its acts to the thought of one object of sense, and which cannot think a successive series with its result ; and the same may be said of the migratory instincts of birds. But it is rather in occasional manifestations of intelligence that the highest mental power possessed by any class of animals is to be seen ; for in every class the actions which are habitual come to be performed by the lower powers. Now the intelligence of birds never reaches to the comprehension of a number of different successive acts, nor to the thought of a principle.

The case of the jackdaws, quoted from Mr. Jesse by Dr. Carpenter, seems indeed to indicate a power of thinking in one thought a series of acts leading to a result, but closer examination shows that this is only apparent.

"A pair of jackdaws endeavoured to construct their nest in one of the small windows that lighted the spiral staircase of an old church-tower. As is usual, however, in such windows, the sill sloped inwards with a considerable inclination; and consequently there being no level base for the nest, as soon as a few sticks had been laid, and it was beginning to acquire weight, it slid down. This seems to have happened two or three times; nevertheless, the birds clung with great pertinacity to the site they had selected, and at last devised a most ingenious method of overcoming the difficulty. Collecting a great number of sticks, they built up a sort of cone upon the staircase, the summit of which rose to the level of the window-sill, and afforded the requisite support to the nest. This cone was not less than six feet high, and so large at its base as quite to obstruct the passage up the staircase; yet, notwithstanding the large amount of material which it contained, it was known to have been constructed within four or five days. Now, as this was a device quite foreign to the natural habit of the bird, and only hit upon after the repeated failure of its ordinary method of nest-building, the curious adaptation of means to end which it displayed can scarcely be regarded in any other light than as proceeding from a *design* in the minds of the individuals who executed it."

The question is, does this indicate that jackdaws possess the power of comprising in one act of thought a series which sense could perceive only in succession?

Now the cone of sticks is a single object of sense. The idea of it may have been formed by successive acts of thought, suggested first by the need for a support at the base of the nest, and then by the need for an additional support for this, and so on, till a bottom was reached; but each such thought would combine with the preceding ones into an idea of a single object of sense. The last element added to the idea would be the thought of the foundation, and this would suggest the first act of construction; and the process of construction would proceed, realising in succession the ideas of the successive parts without ever involving the thought of more than a single object of sense. The device was foreign to the natural habit of the bird, yet not quite foreign to the thoughts which the nest-building instinct involves. For the various peculiarities of the sites chosen for nests must awaken in birds instinctive associations of corresponding varieties of construction, and these must involve ideas of supports, and of the other requisites for stability.

The nest-building instinct must also often involve a desire for shelter and protection; and with those birds which have vivid and distinct mental action, a special need for shelter may awaken instinctive associations which suggest the construction of artificial shelter. Such constructions may seem to require a number of different ideas thought together in a plan, but they do not really imply the thought of more than a single object of sense at one time. Thus a pair of magpies, in a neighbourhood where there were no trees, built their nest in a gooseberry bush, and frequented it for years. But as it was accessible to foxes, cats, and other animals, they barricaded with a circle of briars and thorns not only the nest, but the whole bush.<sup>1</sup> In this case the desire for protection would operate succes-

<sup>1</sup> Watson's "Reasoning Power in Animals," p. 343.

sively with regard to each side of the nest, and would suggest successively the erection of each piece of the barricade, without ever thinking more than a single object at once.

For it is to be noted that when an object is thought with desire, and when it suggests through former association what led to its own attainment, the desire will attach itself to this suggested idea, even though there be no power of thinking means and end together. In order that the original desire should thus be taken up by a series of means, so as to cause them to be sought after one another as ends, a process of association is necessary which requires a long course of repetition ; but this would never take place, unless there was a partial transfusion of desire to the nearest means in the first instance. And when the desire is strong this transfusion will be sufficient to cause the immediate mean to be sought even where each thought is limited to one object of sense. Thus birds as well as mammalia seem to have intelligence enough, when accustomed to the company of man, to associate human intervention with relief of their distress in special cases, and to apply to man for help ; and when his help has come to them in a painful form, as for example in a surgical operation, they continue to desire it notwithstanding the present pain. But there is no evidence that any animal below the order to which the beaver belongs can think a series of sense-perceptions or a general principle, though there may be cases which simulate these powers. The old story of the raven throwing pebbles into water as if to raise its level, seems to indicate the knowledge of a general principle ; but if the incident ever occurred, it was more probably a suggestion from the familiar act of standing on a stone to drink in a stream, in which the bird thought only this single act.

In the order of rodents, to which the beaver and the rat belong, we first meet the power of thinking a series of acts, but this power is still so limited in them that the series of acts which they perform with conscious purpose consist only of one or two acts, or of one or two acts repeated over and over again. A more diversified series of acts, like that which is required in the construction of the beaver's dam, is with them instinctive. Moreover, they seem to have a tendency to perform those actions which involve the most design in combinations in which several are engaged, each one doing a part of the action. This is a feature of resemblance to the intelligence of insects, and corresponds to a limited power of thinking a series of acts. For this simultaneous performance by the community of all the steps leading to an end helps to enable each to perceive by sense the entire series all at the same time. The ruminants have a larger power of thinking a series of acts, as may be seen in the artifices of the hunted stag, though it is hard to say how much of these may be instinctive ; and still more clearly in the intelligence of the oxen of the Hottentots, which in war fight with the Hottentots against their enemies and in peace perform for them the same services that are elsewhere performed by dogs. In the pachydermata, the power of plan and purpose and of understanding a series of acts which is expected from them is clearly manifested by the elephant. And though the other pachyder-

mata are so inferior in intelligence to the elephant, the inferiority is not in the nature of their thoughts, but in vividness and distinctness. In the carnivora, the intelligence of the dog and of the fox, and of the other animals of the order, exhibits clearly the power of design; and the dog, moreover, shows his power of thinking a series of acts by the signs which he gives of feeling guilty, or ashamed, or proud on account of his conduct. In the quadrumana there appears for the first time, in addition to the powers of purpose, a sense of general principles; and this, as has been shown, appears with clearness in the anthropoid apes.

Now, such being in outline the development of the powers of intelligence in vertebrate animals, what is the course of development of their brain?

This question may be answered by the following quotation from Dr. Carpenter's "Mental Physiology," p. 116.

"That the different portions of the cerebrum should have different parts to perform in that wonderful series of operations by which the brain as a whole becomes the instrument of the mind can scarcely be regarded as in itself improbable. But no determination of this kind can have the least scientific value that is not based on the facts of comparative anatomy and embryonic development. In ascending the vertebrate series we find that this organ not only increases in relative size and becomes more complex in general structure, but undergoes progressive additions, which can be defined with considerable precision. For the cerebrum of oviparous vertebrata is not a miniature representative of the entire cerebrum of man, but corresponds only with its 'anterior lobe,' and is entirely deficient in that great transverse commissure, the corpus callosum, the first appearance of which in the placental mammals constitutes 'the greatest and most sudden modification exhibited by the brain in the whole vertebrated series' (*Huxley*). It is among the smooth-brained rodentia that we meet with the first distinct indication of a 'middle lobe' marked off from the anterior by the fissure of Sylvius; this lobe attains a considerably greater development in the carnivora; but even in the lemurs it still forms the hindermost portion of the cerebrum. The 'posterior lobe' makes its first appearance in monkeys, and is distinctly present in the anthropoid apes. The evolution of the human cerebrum follows the same course. For in the first phase of its development, which presents itself during the second and third months, there is no indication of any but the anterior lobes; in the second, which lasts from the latter part of the third month to the beginning of the fifth, the middle lobes make their appearance, and it is not until the latter part of the fifth month that the third period commences, characterised by the development of the posterior lobes, which sprout as it were from the back of the middle lobes, and remain for some time distinctly marked off from them by a furrow."

These facts of embryonic development give great significance to the facts previously mentioned of comparative anatomy. And the latter have such correspondence with the sketch just given here of the development of the powers of intelligence as at once to suggest that the functions of the anterior lobe belong to the act of thinking single objects of sense, those of the middle lobe to the act of thinking such objects with a sense of a succession of them and as part of that succession, and those of the posterior lobe to the act of thinking a



co-existence or succession of them as a case of a general principle. But as the development of intelligence in vertebrate animals, even if the view just taken of it be correct, may be thought to be connected rather with other features of the development of the brain, and as the view taken of the course of development of intelligence may itself be questioned, it may be well to study the question from another point of view. I shall therefore consider briefly the functional meaning of those other features of brain development as it may be suggested by the analogies of the nervous system itself, and that of the successive addition of the three lobes as it may be inferred from the analogies of development in general.

There are two other striking features in the development of the brain in the vertebrate series of animals, namely, the progressive increase of the superficial or cortical layer of the brain, and the increased development of the fibres which connect together the different parts of the brain.

Now the superficial layer of the brain is the part where the nerve force of the brain is developed, and its increase, supposing the functional activity of any given extent of it to remain undiminished, must be accompanied by an increased development of cerebral force, and therefore of mental action. Moreover, such an increase of the superficial layer, without any change of the relations of its parts, would magnify each part so that an amount of cerebral force corresponding to a thought might be developed in a smaller fraction of the whole. Thus the actions of the brain in connection with the mind would be subdivided and thought analysed; and the effect of the increased size of the cortical layer of the brain, in consequence of the increased number and depth of its convolutions, would be not only an increased amount of mental action, but also an increased subdivision of thought; that which was a single idea of an object being broken up at pleasure into a number of different ideas.

An increase of mental action corresponding to an increase of the convolutions may perhaps be seen in the indications observable in dogs that they dream in their sleep. It is more distinctly manifested in the curiosity displayed by monkeys, and in that general interest taken by them in objects irrespective of utility, which has caused some authors to impute to them an inferiority to other animals in common sense. But the increase of mental action is chiefly to be seen in whatever shows a habit of reflection. And though the higher animals may be observed contemplating objects, the power of reflection is scarcely open to our observation except in ourselves. In us it is developed in a degree corresponding to the enormous increase of the cortical layer of the brain and of its functional activity as shown by the increased supply of blood.

The analysis of thought which is probably also connected with this particular brain-development breaks up the idea of a single object of sense into ideas of parts which are seen to constitute it. It is no doubt concerned in that observation of the way in which things act on other things which leads monkeys and apes to use instruments, though this is of course facilitated by their having hands. With

this analysis of thought is connected the development of the powers of abstraction, and comparison, and perception of relation. For though these powers are possessed in their essence by all animals which can at will observe either separately or together objects which are together before their senses, yet in order that they may act with any degree of fineness a fine analysis of thought is needed. In human language, the analysis of thought reaches its acme.

The second principal feature in the development of the brain is that of the system of nerve-fibres which connect the parts of the brain with each other. These must minister to the action on each other of different parts of the brain, and serve to make the action of the different parts of the brain consentaneous, so as to give correspondence to the muscular action of the two sides of the body, and strength and steadiness to thought. Attention and volition require this unflinching unity of action; for if any part concerned did not concur decisively, its indecision would affect the other parts. And in proportion as powers of thought are developed which are less closely connected with sense, there is still more need of these connections to preserve that unity of action which the impressions of special sense, by reason of their decisive unity, give to cerebral action immediately connected with them. Accordingly, the great transverse commissure which connects the two lateral halves of the cerebrum appears first with any degree of development worthy of notice in the rodent order of the mammalia along with the middle lobe. Thus neither the convolutions nor the fibres of the brain seem to have any tendency to give that extension to thought which has been assigned to the three lobes. They improve the action of the brain rather than enlarge the range of its objects. But the development of each additional organ of intelligence extends the range of the objects of thought. And it is as superadded developments that the three lobes appear both in the vertebrate series of animals, and in the development of the human embryo.

And now what suggestions as to the functions of the three lobes may be derived from the general analogies of development as giving successively the advantages which are needed in the struggle for life?<sup>1</sup>

The general function of the cerebrum is to direct the actions of the body by thoughts of the mind to the attainment of desirable ends, and each distinct addition which it receives may be expected to correspond to a distinct enlargement of that power.<sup>2</sup>

<sup>1</sup> The development spoken of is only that which is to be observed as a matter of fact in comparing the higher animals with the lower. Whatever theory be adopted as to the mode in which that development has been produced, it is a fact that in general each new development gives an advantage in the struggle for life, and that the general course of development corresponds with the satisfaction of these successive needs.

<sup>2</sup> It is an essential property of the nervous system to form associations, and any higher development of that system must exalt the power of association. When an action has been performed by a part of the nervous system, the restoration by nutrition of the force expended in the action seems to adjust itself to the then condition of the organ, so that when the action is performed again, the organ in recovering its equilibrium after the action tends to be thrown into that same condition. And if

The intelligence requisite for the attainment of desirable ends consists of knowledge of the ends and knowledge of the means ; but this degree of intelligence is only gradually attained. We find that in some animals which have no cerebrum certain sensations have become associated with the origination of certain muscular movements, so as to direct the actions of the body in accordance with the notices of external things which sensation gives. We must suppose that in these animals, when a new sensation of a pleasurable kind has been imparted by an object, the presence of a similar object again will tend to recall that sensation. A mental state thus elicited by association follows that which calls it forth ; and the obscure sensation thus recalled by the recurrence of the object will follow the impression which the object makes directly on the senses. Now the pleasure of the recalled sensation must be combined with the direct impressions made by the object, instead of only following them, in order that the present object, and not the mere past sensation, may be the object of desire. A pleasurable sensation thus awakened by association tends gradually to coalesce with that which often calls it forth. But this process is too slow for the prompt recognition of desirable objects ; and the demand for development therefore will be the want of an organ to combine the successive impressions made by objects on sense, so as more rapidly to select by experience those objects which are desirable as ends for action. Accordingly the first function of the cerebrum should be to enable the mind to combine the impressions of sense into perceptions of sensible things, adding each new impression to the idea of the thing, as a quality inhering in it. Connected with this perception of desirable objects a power of thinking those objects in their absence is needed in order that they may effectively guide action by continuing to be the ends towards which it is directed. This need would be supplied by an action of the cerebrum on the sensorium, whereby the cerebral states which are produced by the impressions of sense may afterwards renew those impressions in the centres of sense, so as to supply ideas of absent objects ; and accord-

on the first occasion the action was followed immediately by another action which quickened the life of the organ, as when an action gives pleasure, then the renewal of the first action will tend to throw the organ into a condition which is at the same time one of exalted life, and one which it is natural for the organ to assume after the performance of the two actions in succession. The organ will then not only be quickened by the first action, but in the effort to attain equilibrium will tend to perform the second. And thus the sequence of two acts, of which the second gives pleasure, produces a twofold effect. It combines a degree of pleasure with the first act in its next performance, and it associates the second with it in a similar degree. Moreover, when the immediate effect of any action is to promote the life of the nervous system, as when an action gives pleasure, it seems by a general law of life to attract the force of the system while it is being performed, and to stimulate its nutrition afterwards. The disturbance caused by it in the first instance will be the greater, and when afterwards induced by an antecedent associated action will have the more force in eliciting it again to attain equilibrium : and the subsequent nutrition being accomplished more quickly while the one condition of the organ lasts, will correspond more closely to that condition, and cause it to be reproduced afterwards more faithfully. Thus an attractive action will have a special tendency to be associated with another action which preceded it, and will also tend to infuse into that other action a portion of its own attractiveness. A painful action arouses the life of the nervous system to resist it, so that it too has a special tendency to form an association ; but here the association is negative of the action.

ingly the function of the first lobe of the cerebrum in connection with thought should be to act with the sensorium in the perception of sensible things, and afterwards in the renewal of the idea of them.

If we analyse our own consciousness we find that there is in every perception or idea of external things an element of thought which is the centre or nucleus of our idea of the thing. This element of thought, though it has no mental image, can be distinguished by the human mind as substance; and the thought of substance therefore in a more or less indistinct and rudimentary form is probably what corresponds to the first contribution which the cerebrum gives to the powers of thought. In this element the sensations are combined into unities; for to substance they are all referred as qualities inhering in it, and constituting with it sensible things. And the first rudiments of position and dimension are probably added to the ideas of things from the series of muscular sensations associated with the sight of them during the motion to them or about them. As the cerebrum grows in the vertebrate series of animals and thought gets subdivided, the comparative attributes of things and the relations of things are thought; new emotions, desires, and aversions grow out of the associations of ideas of things with the pleasures and pains which are essentially involved in various modes of nervous action; and possibly that reaction of the cerebrum, whereby after one thought has been conceived another is elicited in the mind, may become localised in different parts, and specialised as different powers for ordering the successions of thought, so as to compare, combine, observe relations, and awaken emotions; the cerebrum and sensorium being both probably in action whenever an idea or mental image is before the mind. The cerebrum is also connected with the centres of motion, combining into unities groups of muscular actions as it combines into unities groups of impressions of sense, and extending and facilitating the associations between thought and action. Simultaneously with the cerebrum the cerebellum also makes its appearance in vertebrate animals. It is believed to co-ordinate the actions of the muscles with one another; and as its connections are principally with the spinal cord, it probably serves as a store of force, which having been set in action by the contracted muscles through the posterior nerves, continues to maintain through the anterior nerves the stimulus to muscular action. Thus the cerebellum probably keeps up the activity of the groups of muscles which have been set in motion, that the momentary impulses which come from the brain may carry on with steadiness the progress of the action. For volition acts at each moment in producing slight changes in the existing action of the muscles, or directing that that action shall be unchanged or suspended.

Now after the power of thinking the ends of action the next development which is needed in the furthering of attainment is the power of thinking the means. For though the various steps in the process of attaining an end may be joined one to the other by association, action will not be moved to take those steps till the desire inspired by the end has been transferred to them, and this transference by association is, as has been said before, a gradual process.

The same necessity therefore for a new power of combination which demanded the first development of the cerebrum in order to combine sensations into a perception of a sensible thing, will demand a fresh development of that power in order that the mind may think means in combination with their end, as leading to it. The desire inspired by the end will then combine with the means so as to prompt their adoption ; and the idea of the means as such, that is, as leading to the end, will be formed, and may be renewed in their absence so as to maintain the guidance of action.

Thus the middle lobe would be developed to act along with the anterior lobe so as to give a sense of the series leading to the end ; though there can be no idea or mental image except of that part of the series with which the cerebrum is impressing the sensorium. To the middle lobe thus acting with the anterior would belong on this supposition the power of thinking acts with a view to their end, the power of thinking a series of occurrences, the distinct sense of time, a fuller development of that idea of space which springs from the sense of a series of muscular movements, the thought of action or fact as part of a series, and therefore involving time ; and as substance is the special thought corresponding to the action of the anterior lobe, so fact or occurrence in time would be the special thought corresponding to that of the middle lobe, combining into a unity the series comprehended within the time of occurrence, and inhering in a subject which is thought by means of the anterior lobe and sensorium. As the cerebrum grew in the development of the vertebrate series and thought was subdivided, the relations and the comparative attributes of facts and actions would be thought, and new emotions, desires, and aversions would be formed in connection with them. Particular powers of combining them and comparing them, and thinking them with an emotional sense of them, might possibly be located in different parts of that region of the cerebrum which consists of the anterior and the middle lobe, and it would be the seat of all moral sentiments inspired by action which are formed by association with facts. To that region would belong whatever is expressed in language by the verb ; and it is some confirmation of this view, that, among the strange effects of cerebral disease producing aphasia or loss of correct speech, it is found that sometimes the nouns are lost while the use of verbs is unimpaired, and sometimes the contrary ; as if the verb belonged to a different part of the brain from the noun. With muscular action the middle lobe would have indirect connection through the anterior, and in consequence of its immediate union with the anterior it might conceivably acquire direct connections of its own.

Now, if such be indeed the course of development, each lobe carries forward by one step the power of directing action to the attainment of its object. Through the anterior lobe the mind combines with the ideas of things the sense of desirable impressions as qualities inhering in them, so as to think things as desirable ends of action ; and through the middle lobe it combines with the end of action steps in the process of attainment so as to think these as means leading to it. But another power is needed for the secure guidance of action towards attainment.

A desirable quality may be erroneously attributed to an object which does not possess it. Means may be thought as leading to an end which they have no real tendency to secure. In order that action may be directed rightly a farther development of intelligence is needed. Not only must there be the *thought* of ends and of means, but the *knowledge* of ends and of means—the power of judging by past experience whether the object really has the quality, and whether the means are really conducive to the end. There may arise from association with the past experience of similar cases a suggestion of the quality as belonging to the present object, or of the means as conducive to the present end; and this suggestion will be more or less strong according to the frequency and uniformity and interest of the past experience. But the strength or weakness of the suggestion is not sufficient guide to the reality or unreality of that which is suggested. The idea of it may be weak because the experience of it was scanty though quite uniform. And the idea of it may be strong because the experience of it was accompanied by special interest, though there were many cases in which it was not realised. What is needed is a sense of the degree of uniformity of occurrence in cases similar to the present, and the extension of that degree of uniformity to the present case; in other words, a power of thinking the degree of uniformity of past experience in combination with the present case, so as to impart to the present case a belief in the presence of the element proportioned to that uniformity. This should be the next development; and accordingly the posterior lobe should act along with the middle and anterior lobes in such a way, that when by the associations which they form the thought of a fact or thing awakens the thoughts of other like facts or things, then the posterior lobe shall receive the impressions of those other ideas, so as to strengthen the sense of an additional element in which they agree, and strengthening that element in proportion to the uniformity of the agreement, to combine it in a corresponding strength of apprehended fact with the object which is before the mind. This would be, in a more or less rudimentary form, according to the degree of development, the power of thinking a fact as a case of a principle. It is the physiological expression of the first obscure beginning of syllogistic reasoning. To the posterior lobe thus acting with the middle and anterior lobes would belong, according to this view, reasoning and principle and all the tendency to generalise in the sphere of fact and in the sphere of morality. As the cerebrum grew in the course of vertebrate development and thought was subdivided, the relations and comparative attributes of general principles would be thought, and possibly special powers of dealing with general principles and seeing emotional aspects of them might be localised in the cerebrum. The associations of action with reward and punishment, approval and disapproval, already formed by the instrumentality of the middle and anterior lobes, would be generalised by that of the developed cerebrum into universal principles of morality inherent in the nature of things, and the constraining influence which such associations exert on conduct would be elevated into natural obligation.

Thus the hypothesis with regard to the functions of the three lobes

of the cerebrum which is suggested by the natural order of development as determined by the great requirements of life, is that which an analysis of the degrees of intelligence in vertebrate animals seems also to indicate. So that though each class of facts is so intricate and obscure as scarcely to afford a solid footing for investigation, yet their agreement may perhaps be considered to give a degree of positive probability to the general views here given of the mechanism of thought in the brain. And if it be objected that considerable portions of the cerebrum may be removed without any apparent mutilation of the powers of thought, showing that no part of the cerebrum is specially connected with any act of the mind, it is to be observed that the acts of the mind become by association so connected with each other that in each thought there are many associated elements, and the corresponding seat of cerebral activity would be not in one but in many localities throughout the brain. Even if some of these were removed, the action of the others would still, by association, elicit and be elicited by the accustomed impressions of the sensorium and stimulation of the centres of muscular action. Moreover, in other parts of our constitution, the impaired action of one organ is often replaced by a new action of other organs, owing to the demand which the general habit of the body sets up for that which is missing. Much more may such substitution take place in the brain, the action of a lost part being supplied by new action of another part, when the parts are all so associated in action and so closely akin as parts of the same organ.

If there be such a distribution of function through the brain, each part may receive impressions from other parts, and give to the impressions which it receives the form which is proper to its own action. Thus the anterior lobe may receive from seats of simultaneous action in the middle lobe, in itself, and in the sensory ganglia, impressions of fact occurring in time, and to its action on those impressions would correspond in the mind a conception of fact, in which it would be summed up as a substantive object. Or the anterior lobe may receive from seats of simultaneous action in the three lobes and in the sensory ganglia impressions of general principles, and to its action on those impressions would correspond the thought of general principles as substantive objects. And in each case the relations and attributes of such objects would come within the scope of the mind.

Now what is there in language which is beyond the powers of the lower animals? There is no reason to suppose that they cannot think of absent objects and give their attention to parts of these, so as to abstract those parts from the remainder. And if the foregoing speculation be not erroneous, there is no form of thought expressed in language which is quite out of the reach of the higher orders of the mammalia. Moreover, a fact or other object which awakens a strong feeling of any kind in an animal will prompt expression of an interjectional nature, and such expression may be connected by association with such object of thought in the general experience of the species, so as to suggest the thought of it to another individual. And such

communication of thought might be carried out to a great extent if found advantageous to the species.

Expression of this kind arises from the need for an outlet through which the nervous disturbance caused by the impression of the object may be discharged. The action is propagated from the nervous centres which have been disturbed by the impression, and spends itself partly in working the organs of utterance, and partly on the sensations which their action produces. The disturbance is thus diffused, and the original seats of it recover their equilibrium more easily. And no doubt the expression of thought in human speech has a similar origin. The thoughts which were expressed originally, involved a cerebral disturbance which needed an outlet for its discharge, and the readiest outlet was audible utterance. Afterwards the pleasures and advantages of communicating thought would stimulate expression and prompt an effort to imitate the thought in the sensations of the utterance, and promote the development of language. But there is no reason to think that its original source was different from that of audible expression amongst the lower animals.

Now if this be so, the peculiarity of human speech is, that it gives expression to such fine elements of thought without being moved by the force of any other associated emotion except the pleasure or utility of expressing them. The conceptions of facts are broken into their constituent parts, and these elements, though so fine, are yet thought with such development of cerebral force that its discharge produces audible utterance to relieve the interest of the thought by imparting it. The nerve force which is expended in such utterance, with its accompanying sensations, is an approximate measure of the cerebral energy engaged in the thought which is expressed. And what language reveals as man's peculiarity is the amount of his cerebral energy.

This peculiarity in man is plainly indicated by the development of his brain and by the proportion of his blood which goes to sustain its action and nutrition. And such vastly superior cerebral energy in man compared with the lower animals implies that their intelligence consists of little more than mere rudiments of his thoughts. A difference in kind separates human thought from the intelligence of those animals which cannot think fact or general principle. And even the highest of the mammalia below man seem to have only the beginnings of the latter. So that even from their intelligence human thought is broadly distinguished by the full apprehension of general principles which is involved in the power of reasoning and in the very ideas of causation, of the constitution and properties of things, and of the moral law.

THE END.









